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The Potentialities of the Youth Movement in America¹

WHEN the 40,000 undisciplined slaves, known as the children of Israel, left Egypt, it was possible for them to reach the Promised Land within a few months. But they were not fit to go in and take possession, because the old generation thought of everything in terms of the fleshpots of Egypt. It was necessary for the young generation, hardened by travels in the wilderness, to come to maturity before the Promised Land could be possessed.

We have left the fleshpots of Egypt. We are on our way. The Promised Land is at hand, and the only question is whether the old generation is fitted to go in and take possession.

We have never had in America a youth movement worthy of the name. Since the war, we have heard much about Flaming Youth and the rebellion of youth in this country; but these terms have merely described a rather smart-alecky, premature sophistication which was the natural reaction to the hypocritical puritanism of certain elements of the older generation. Strange to say, when the Flaming Youth of the war period entered early middle age, it found itself equipped with habits of excessive drinking and forced gaiety which have proved positively repulsive to some of the present younger generation. There may be something exciting about wildness when it seems to be new and novel, but to engage in the more or less obligatory wildness of an older generation is another matter. There is no sense of adventure in that. There is nothing more repulsive to youth than a ritualized elderly obscenity.

Frankly, I think all of us feel it is a shame that the unorganized youth movements of America should have been so identified in the public mind with matters of personal habits. After

¹ Address before the National Student Federation, Washington, D. C., December 31, 1933.

all, these things do not change a great deal from generation to generation. There are always certain elders to be shocked and certain youths who in the innocence of their hearts get a great kick out of doing the shocking. This kind of thing, while it may cause heartbreaks in certain homes, is without fundamental significance. I think we are all agreed that nothing of this sort ever has or ever will constitute a true youth movement.

A true youth movement must be a new, vital, adventurous approach to the potentialities of the coming age. There has never been anything of this sort in the United States because hitherto our youth have seen fit to disagree with their elders only on superficialities. Our college life has expressed its vitality in such rackets as organized football, or college activities of a sort which remain essentially the same from generation to generation.

The depression of the past three years should create a genuine youth movement. Hundreds of thousands of boys and girls who thought they were going to slide through college on father's money now know that either they will have to work their way through college or they cannot go at all. Thousands of students who have recently graduated cannot get jobs. Of necessity, therefore, hundreds of thousands of young people are asking the question, "Why should this great grief have come to us? What has suddenly gone wrong with civilization? What can we do to fix it up?"

They blame their parents and try to get to the bottom of things. This is fine. Go ahead and blame us all you want. My only fear is that you won't strive desperately enough to understand. As I read about foreign youth movements, I am led to think that there is something altogether too smug, complacent, and self-satisfied about the youth of the United States. There is more to college life than talking about football scores and college dances. Of course, the students who take part in athletics, or in running the school paper, are perfectly right when they suggest that there is something more to college than merely studying. But I am wondering if the extra cur-

ricular activities as formalized and commercialized in 90 per cent of our colleges really furnish anything so extraordinarily worth while. As a matter of fact, many of us are beginning to wonder if the colleges themselves are as vital as they should be in furnishing the leadership to enable the youth of today to grapple in an adventurous way with the realities of the coming day. Originally schools grew up around the striking personality of some one individual or group of individuals who were passionately convinced of the need for certain changes. Being continually consumed with the fire of their convictions, they lit up the realities of the immediate future for an entire generation. Afterward, the faculties gather, the piles of brick and stone are erected, but the fire all too often subsides. An orderly, sustained course of study may take its place. But an orderly, sustained course of study, while it is exceedingly important in its own way, is not sufficient for a youth movement.

I think it is a mistake for an older man to be dogmatic concerning the objectives of a youth movement. The young people themselves have keen intuition. If they approach the problems of our civilization with a strong desire to see something worth-while accomplished, I am sure that all of us will be surprised at how rapidly the new world can be brought into being.

It seems to me that youth instinctively believes in the doctrine of the New Deal as against special privilege. It sees no reason why one young fellow should inherit a million dollars when he has no more ability to manage the money for the benefit of society than a million other youths. The matter of passing wealth on from one generation to another in such a way as to increase the wealth producing power of society is a matter of the very greatest concern. Putting the money of the dying generation into the hands of the Government by means of heavy inheritance taxes furnishes an apparently easy answer, but we all must remember that fundamentally sound answers are probably not obtained thus easily. The question is one of bringing about a continuous flow of capital into those industries for which there will be an adequate future demand.

Where do we want to go? What is the fundamental desire of this next generation?

Hitherto the desire of the coming generation was always to exploit the frontier. When the frontier passed out of existence about the time of the war, we turned our desires for a time to the exploitation of marvelous new inventions, but we had gone into this field only a short distance when we discovered that we couldn't go so very far with these new inventions until we had perfected a mechanism for social justice which would enable us accurately to balance production with consumption and to steer this country in its relationship with other nations in a decent, sensible way.

We have not yet perfected such a mechanism. The New Deal merely says that we want such a mechanism and are striving desperately to get it. To that extent, I feel free to say definitely that the New Deal is a youth movement. The men who have proposed it, I fear, are in somewhat the same situation as those who led the children of Israel out of Egypt. Probably they will not live to see you people, the youth, come into the Promised Land, but they can send out spies to determine its nature and can stand with the Lord on the mountain before they die and speculate concerning its possibilities.

I have no doubt that many of the youth are soft-fibred and would like to return to the fleshpots of Egypt. It would be nice to go back to that simple world where we were taken care of even though we did have to make bricks without straw. But fortunately we can't go back even if we want to. The world has definitely changed and we have to go forward. The same old economic laws apply, but they apply against the background of a new situation. We are having to do new things in a new way. We have started on an adventure which is as stimulating as that which confronted Columbus when he set sail in 1492. Our goal is the rediscovering of America—an America rich in human, social resources.

As the youth movement sets forth on its voyage of adventure, some of the most important pieces of equipment are vigor, intense interest, frankness, and lack of prejudice. Narrowness, bitterness and dogmatism must be left behind. It is

up to youth to create simultaneously the new wine of the spirit and the new vessels capable of holding that wine. A narrow, mean, petty nationalism will not be strong enough to hold the spirit of the next generation; neither will a cloudy, idealistic internationalism. I trust also you will not be too easily deluded by those socialistic, communistic ideas which lay emphasis on the economic man to the exclusion of the artistic and religious man. In brief, the youth movement might well be familiar with all the "isms" of the older generation without being definitely committed for or against any of them. You will have to put the facts which confronted your elders into a new and more-living relationship. Think and feel with the greatest intensity, but don't be prematurely logical and set in your ways.

One capacity which I trust both the administrators of the New Deal and the members of the youth movement will have in common is the ability to disagree harmoniously about the superficialities as long as there is agreement on the fundamental attitude. That fundamental attitude as I see it is a pliable willingness to face the facts and a passionate eagerness to shape those facts to bring about a better balanced life, not only in this country but in the whole world. We cannot recognize those who are interested primarily in short-time monetary profits for certain industries or for certain classes. Such people have the special privilege concept of government, a concept which may be appropriate at certain stages in history, but which, I trust, will not be successfully revived in these days when our machinery for production, communication, transportation, and consumption can be so easily operated on a continental and a worldwide scale. Yes, both the New Deal and the youth movement need pliable minds with which to reassemble the facts, broad concepts and the ability to apply these concepts to specific situations in a precise, practical way. Long after the present administration has passed out of office and you have reached the middle age of your voting life, this problem will still be with you. You will doubtless have seen the American people swing several times back from extreme liberalism to extreme conservatism. But, all the time, I trust

that you will do your best to keep alive the dynamic liberal spirit which animated Theodore Roosevelt and Woodrow Wilson and which now finds such a charming and powerful embodiment in Franklin D. Roosevelt.

It is interesting to note how many of the active participants in the New Deal were first stirred up by the fiery leadership of Old Teddy and then again by the resolute righteousness of Woodrow Wilson. In a recent Cabinet meeting at least three of the eleven men there seated were Bull Moosers in 1912, and all of them had been inspired in one way or another by the New Freedom of Woodrow Wilson.

The young men of twenty years ago who followed with such implicit faith the rugged vigor of Teddy and the idealism of Wilson were greatly disillusioned by the politics of the twenties. It seemed as if American progressivism was forever buried. Some of the disillusioned, in their despair accumulating age, fat, and property, became conservative stand-patters. Others, knowing the lessons of history and the fundamental nature of the American people, patiently bided their time. I am mentioning this because you likewise will see a day come when the ideals to which you now wish to devote your life will apparently have no following; but sooner or later, if your ideals are soundly conceived, the time will come when the American people will be willing to give them political expression.

Woodrow Wilson called attention to the desirability of having American political forces express themselves through a conservative and a liberal party. He felt hampered by the fact that there were conservatives in both parties and progressives in both parties. This political anomaly now seems to be slowly in process of correction. When this process is accomplished, there will be a tremendously increased interest in politics on the part of the youth of the land, because the parties will then stand for definitely different attitudes.

To those of you who are instinctively progressive by nature, I would suggest the advisability of cultivating patience and tolerance. It won't do to go around all the time as if you were just getting ready to bite somebody. After a time the

excitement wears off, and you begin to wonder what it was that so excited you when you were young and foolish. To those of you who are conservative by nature, I would suggest the desirability of remembering that there is much more to life than property and wealth. Many of the truly richest individuals have had neither. It is a function of the conservative to point out the practical difficulties of the progressive's idealistic plans. But the conservatives should remember that many of their theories about money, property, and wealth are at bottom unreal and will so be proved by history. Neither progressives nor conservatives have a monopoly on idealistic fantasy. I am assuming, of course, that the majority of the members of any youth movement will be progressives, but that a considerable portion of them will turn conservative as they lose their hair and expand their waistlines and their bank accounts. While it is the conservatives' function to be intensely practical, that ought not to be confused with simply being selfish; and while it seems to be the progressives' function to be idealistic, that idealism ought to be based on potential realities rather than on vague mystic emotion.

Those of you in whom I am most interested are those who, even though they are wealthy twenty years hence, will still have the same fiery interest and faith in the future of mankind that they have today. You are forming your ideals today; you will be putting them into active use twenty years hence.

HENRY A. WALLACE,
*United States Department
of Agriculture.*

Accrediting Schools and Colleges¹

INTRODUCTION BY DEAN HERBERT E. HAWKES

We are specially fortunate in the next speaker who will address us this morning. I feel that it is a very high compliment to this group and to the associations which are represented here that Commissioner Zook should leave the heavy responsibilities which burden him in Washington and come here to address us. As you know, Commissioner Zook has been in the forefront of the hottest battle in the North Central Association in the question of accreditation of schools and colleges, and the topic on which he speaks is a topic on which no one could speak with greater authority. It is a pleasure to present Dr. George F. Zook, United States Commissioner of Education.

ADDRESS BY COMMISSIONER ZOOK

"IT will be a dangerous, a most dangerous experiment, to hold colleges subject to the rise and fall of popular parties, and the fluctuations of political opinions. Benefactors will have no certainty of effecting the object of their bounty; and learned men will be deterred from devoting themselves to the service of such institutions, from the precarious title of their offices. Colleges and halls will be deserted by all better spirits, and become a theater for the contentions of politics. Party and faction will be cherished in the places consecrated to piety and learning."

So thundered Daniel Webster in his concluding arguments before the United States Supreme Court in the famous Dartmouth College case more than 100 years ago.

The argument made a deep impression on the court. In the decision the Chief Justice, John Marshall, declared that "no man ever did or will found a college, believing at the time that an act of incorporation constitutes no security for

¹ Address at the Second Joint Educational Conference, New York, Nov. 2, 1933.

the institution; believing that it is immediately to be deemed a public institution, whose funds are to be governed and applied, not by the will of the donor, but by the will of the legislature. All such gifts are made in the pleasing, perhaps delusive hope, that the charity will flow forever in the channel which the givers have worked out for it."

Remembering the sentimental appeal for liberty of teaching that went with the founding of each of the colonial colleges by the several religious denominations and the deep emotions that were stirred by the issue of freedom in teaching which seemed to be at stake in the Dartmouth College decision a century ago, it is difficult to resist vigorous applause for every effort at self-determination and self-government undertaken in our schools and colleges.

Yet nowhere in America does the voice of individual or institutional freedom speak with the same vigor or carry the same conviction as it did a century or so ago. The individual comes to realize that there are advantages to be had from social living even though he may have to surrender certain liberties. What is true of individuals holds equally true for institutions, both business and educational. The stern battle for independence of action which seemed so necessary then is often not impressive now.

The Dartmouth College decision guaranteed the liberties already granted or to be granted in college charters. As such it seemed a veritable rock of educational liberty. But it also served to warn the rising democratic sentiment that if it wished to make college education serve its purposes it must be careful to leave a way for future public opinion to express itself. Hence states began to restrict the liberties given to individual colleges in charters. In some instances legislatures placed authority relative to institutional powers in the hands of a board or commission. In others the state constitution specifically reserved the right to amend or modify the powers which may be exercised by colleges founded thereafter. Therefore, when the Berea College case came up for decision, the courts made a very different disposition of the matter. The authority of the state to regulate the

affairs of the college was vindicated. Berea College was subjected to the social requirements of the people of Kentucky. There can be no doubt that the social philosophy behind the Berea College case is at least equally representative, and I believe more so, of the present genius of the American people than that so ably set forth by Daniel Webster more than a century ago.

Finally, the rapid extension of public higher education through universities, land grant colleges, teachers' colleges, and now, junior colleges is merely another way of declaring the interest which the public has in the conduct of higher education as well as in all other phases of social life.

Theoretically and practically I believe that we must accept a large measure of social control as desirable and necessary both for schools and colleges. I will not say that I believe it is always wisely exercised—no manifestation of democracy is—but ordinarily I am convinced that it is wiser to guide it than it is to resist it.

I do not believe, therefore, that it is any more possible for a college or a school to live in "splendid isolation" than it is for a country or for an individual to do so. Changes in national economic circumstances, reorganizations in the program of education, modifications of popular social philosophy play an unending tattoo on all social institutions including our schools and colleges. Ultimately upon every one of them public opinion leaves its impression; and each goes about the business of responding to it, some sooner, some later. One must, therefore, accept, I am convinced, a large amount of social control in all forms of education.

Granted, but does it necessarily follow that social control shall be equally restrictive in all forms of education? Is it not clear that there is more public necessity for restraint of liberty in connection with the several forms of professional and technical education than is necessary or wise in the wide field of liberal education? I subscribe to this belief. The practice of a profession is society's affair. The practice of a liberal education is largely, though not exclusively, the individual's affair. A liberal education is partially for the

satisfaction of individual wants of little or no concern to society in general or to any other individual. On the other hand, what is taught in the medical or dental curriculum affects the very lives of individuals. The law school cannot exist for a day without discussing great problems of human relations which are vital to our social existence. Hence we accept with little question legal restraints in most fields of professional and technical education which do not seem to us necessary or desirable in the field of liberal education.

There are, therefore, some leaders of educational thought who question whether there is any real necessity for legal control or for control of any type of liberal arts colleges and universities. Those who hold to this belief fail to keep in mind the sordid history of "diploma mills" in this country. Very few states have been spared this demonstration of chicanery in the name of educational liberty. I have often wondered what Daniel Webster and John Marshall would have thought if they had read the following advertisement years ago:

"We can legally incorporate you a school for anywhere. You can teach and confer degrees. The United States Incorporating Company, 1917 Seventh Street, N.W., Washington, D. C."

Perhaps in the light of a few such illustrations as this, even they might admit today that in the public interest there is something to be said in favor of some limitation on the liberties which institutions may exercise.

I have stated that society needs a way or ways of making its needs and conclusions articulate to the schools and colleges. Is this not the task and responsibility of the governing board authorized by the charter or the law establishing the institution? Upon them public opinion beats continuously, and the fact that they do not always pursue a course of action exactly in line with the apparent demands of society at the moment may ultimately prove both wise and farsighted. This assumption is correct, and I for one believe that educators have been altogether too remiss in appreciating and acknowl-

edging the days and years of unselfish attention which thousands of men and women have given to the schools and higher institutions in whose service they have enlisted as members of governing boards. Some institutions have been blessed through a long history with many wise members of the governing board. All have been fortunate in securing at least a few such persons. But after all has been said in praise of governing boards that can and should be said, is not the story of the way in which they have interpreted the needs of American life to school and college authorities generally a very disappointing one? Governing boards have, as everyone knows, a long catalog of sins—mostly sins of omission—which might be paraded at length; but I will refrain from elaborating on the obvious. I wish merely to have you join with me in concluding that as interpreters of their constituency and of American scientific and social life, governing boards fall far short of their opportunities and responsibilities. Obviously society needs other means of interpreting itself to the schools and colleges.

The regular and final method which the American people use for the expression of their views on education as well as all other matters of common concern is the law. Year after year state legislative mills, composed of the elected agents of the people, grind out volumes of laws among which one sometimes finds a law dealing with education. Occasionally in the mass of this state legislation one finds real trends of policy not always in line with the desires of educational administrators, as, for example, the increasing centralization of the administration of public higher education within the states. In some of these matters the state legislatures have been wiser than college administrators and boards of trustees combined. State legislatures as a means of expressing public opinion about education are not, therefore, a complete failure. They certainly have not been guilty of all the apprehensions of Daniel Webster. In general, however, formal legislative law is not a successful method of keeping the educational institutions abreast of public needs and desires. Legislatures are too far away from and too little acquainted

with the problems involved to give a great deal of intelligent attention to them. As a means of preserving quality of work within institutions, they are, except in minor instances, a total failure. Even when evident good is accomplished temporarily by writing standards into the law relative, for example, to the endowment required of a college or the requirements for preparing students to enter the professions, including teaching, these standards soon prove to be inadequate or, worse, out of date.

The best that the law can do for the schools and colleges, therefore, outside of legalizing the establishment of their governing boards, is to authorize the creation of public officials who have power to set up certain requirements for the maintenance of proper standards of educational work. Often this is done indirectly, because of the presence of old charters granting extensive privileges to the colleges, by setting up a requirement that individuals who wish to qualify for entrance into the professions or into teaching must have completed courses of study in institutions possessing certain facilities. The regulations of state authorities are much better than formal legislative law because regulations can be and generally are more flexible than statute law. Furthermore, the officials who make them are closer to and understand the problems better. They may even, indeed in some instances often do, carry on extensive study of situations before issuing their decrees or they may lean heavily on the advice of accrediting agencies.

Up to this point I have endeavored to show that schools and colleges are organizations established by society for a social purpose, and that no matter how much legal liberty they may enjoy they must and should, just as in the case of all other social institutions, be subjected constantly to the scrutiny, criticism, and even regulation of the society in which they live and which they serve. I am convinced, therefore, that in general it is this criticism and regulation which helps powerfully to keep them abreast of changing social needs. All of these agencies of society, however, the governing boards of schools and colleges, the laws passed by state

legislatures, and the regulations of state educational authorities have exhibited obvious deficiencies. Therefore, while I am convinced that all of these agencies of society have contributed notably to the success and progress of schools and colleges, yet experience shows us that they are not enough. Particularly they are ineffective in the realm of institutional quality.

In the realm of quality of educational work there is, however, the same need of effective means of criticism which will result in action as in other aspects of its activities. Obviously in this respect only the schools and colleges themselves acting jointly are in a position to formulate the best practices and the most accepted standards. Such a demand and such a realization gave rise to what we now know as the accrediting agency. An accrediting association such as the Middle States Association is the cooperative venture of a large number of schools and colleges which are earnestly seeking first to ascertain what are the best standards of educational work, and secondly what are the effective ways and means of bringing these standards to the attention of the schools and higher institutions within its constituency.

What are its virtues as against other agencies of society? In the first place, it serves as a protection to institutions against the hasty and ill advised actions of state legislatures and even state educational authorities. Indeed, its standards and lists of accredited institutions help local authorities to elevate the tone and performance of local institutions which would otherwise be impossible.

Secondly, it is not a debating society only. It has enough authority so that its conclusions carry weight. It can get something done. Finally, its conclusions and its actions are the cooperative work of the institutions themselves and as such are subject to constant mutual criticism and modification. If we had no such agency, we could better appreciate how sorely they would be needed. The fact that they grow in importance yearly in spite of obvious deficiencies is a testimonial to the continued need of them in this country.

METHODS OF ACCREDITING

The liberty in education of which the people are most jealous is the subject-matter content itself. Hence in America any system of final examinations, so usual in Europe, except possibly those in distinctly professional fields, has been looked upon with suspicion. This is particularly true relative to the field of general cultural education where the quality of preparation for personal and social life seems constantly to be in question. The American people do not believe that there is a general culture which may be defined in meticulous details. They prefer as yet at least to experiment a good deal before they allow it to crystallize.

Fear of government in educational affairs and yet a realization that there must be some means of educational control and guidance produced the accrediting agency. Fear of subject-matter control through examinations or otherwise drove the accrediting agencies to exercise their control through a definition of the minimum external conditions under which educational institutions might operate. Hence, while the accrediting agencies, especially those operating in the general fields of education, did not claim the virtue of defining the good qualities in education, they could not in most instances be accused of breaking the great American tradition of freedom in teaching.

I have mentioned this historical background in order that you may think of the accrediting agencies, first, as a natural evolution in American educational history, and, secondly, to explain in part why it seemed necessary in the earlier days to select such crude methods of evaluation. These crude methods have now produced a widespread revolt among educators and laymen alike who are demanding that we find other and more direct ways of identifying educational effectiveness while at the same time preserving intact that liberty of objectives and quality of instruction that seems to be all but instinctive in American character.

Psychological Factors.—There is another explanation of our present situation which I believe to be purely psychological.

Anyone who has ever attended a faculty meeting, or sat in at the sessions of a state legislature, or gazed in awe at the operations of one of our accrediting agencies will not have to be reminded how instinctive it seems to be for well-intentioned, presumably intelligent people to seek some panacea in the form of a rule or a law which will reduce to as near zero as possible the amount of thought and judgment necessary to the solution of each individual problem as it arises. There can be no doubt but that rules and laws are extremely important vehicles of society but they also represent defenses behind which even educators who ought to know better hide cowardly until long after their usefulness is past. Hence, I foresee not only a present but a long continuing future danger to education of these processes of evaluating higher educational institutions through the natural but relatively ineffective definition of the conditions under which these institutions may operate. The human mind instinctively hopes to attain an abstract social goal through a continued process of fiddling with the attendant machinery.

We have so long devoted ourselves to the perfecting of external machinery as a means of identifying the respectable higher educational institutions as to lead many discerning people to fear sincerely that we have created a Frankenstein for ourselves. I do not think so, although I must admit that I can see the embryo of such a monster. I am certain, however, that before breath is given to his nostrils or blood to his veins American educators will either slay him or, through some more or less violent metamorphosis, change him into a good educational workhorse.

At this point may I digress to comment upon a line of discussion which has been interpreted by many people as removing all reason for accrediting colleges and schools. I refer to the development of the testing and personnel movements which it is said substitute the accrediting of students as individuals for the accrediting of institutions. Such an argument seems very intriguing at first but I am convinced that conclusions much too far reaching in character have been drawn from the studies which have been made.

Recent years have seen a tremendous advance in devising scientific measures for testing the native ability and the achievement of individual students. All of us rejoice at the progress which has been made in this field. We believe that the testing movement will gradually enable us to solve many of our most difficult problems in counselling, guidance and placement. If I err in my attitude toward this new device of education it is the same error which many other ardent friends of the movement commit, namely, that of placing far greater reliance on the results of tests than dispassionate judgment probably justifies. I mention this because I do not wish my position relative to the value of the testing movement to be misunderstood.

The researches of Professor H. H. Remmers in Indiana and the group at the State University of Iowa, for example, are in point. In both of these states through an extensive testing program of students enrolled in the secondary schools it was demonstrated first that there are marked differences between the achievement of students in the various schools and that the present methods of accrediting schools did not by any means separate out the schools whose pupils on the average achieved the most from those which had lower averages. Furthermore, even the schools with the lowest averages had considerable percentages of students in the upper brackets while the best always contain many who do not show up well. Hence Professor Remmers concludes:

"According to the data presented in the foregoing sections, neither the Indiana accrediting agency nor the North Central Commission is very successful in evaluating high schools. As a matter of fact, 'approval' by either or both of these agencies means little in terms of what the schools under consideration really accomplish educationally."²

It should be admitted at once as I have endeavored to do elsewhere in this paper, that the methods used by the accrediting agencies in evaluating the effectiveness of a school or col-

²Remmers, H. H. and Trimble, O. C. Measures of Educational Outcome Versus Standards of Institutional Machinery as High School Accrediting Criteria. Bulletin of Purdue University. Studies in Higher Education XXII, p. 34.

lege have been crude and unscientific but it does not follow, simply because there is a wide difference between two schools as to the levels which their students reach respectively on achievement tests, that one is a better or a more effective school than the other. Any two schools will vary greatly in the types of students which they enroll just as any single school will contain students with a rather wide range of ability. Hence to assume that only those schools or colleges whose students make the highest average on tests are the ones which should receive recognition is to ignore altogether both the level of native ability and of preparation which students possess at the time of entrance. A school or a college may enroll students of fairly high ability and good preparation and yet do relatively a poor piece of work. On the other hand, a school or college enrolling students whose level of native ability and preparation may be fairly low and which adapts its resources vigorously to a program suited to the needs of its students may be in its realm as effective if not more effective than the first institution. Until, therefore, we relate the results of tests for native ability to the results of achievement tests from the same students, until we compare the achievement of students at the end of two, three or four years with what they started out with, and until we take into account the differences in objectives which the respective schools and colleges may be expected to have we have no right to assume that a high level of achievement test scores is any better gauge of the effectiveness of the school or college than the crude methods now being followed by the accrediting agencies as a means of identifying the effectiveness or the quality of the institution. So far as I know the conclusions which have been reached relative to the substitution of the accrediting of individuals for the accrediting of institutions have not been based on considerations of this kind.

When that stage of development is reached in the testing program the results of tests may become a significant means of identifying the quality and the effectiveness of the educational process at a given school or college in comparison with what is found through the same process at another school or

college. To whatever extent therefore that tests can be used in the process of accrediting schools and colleges, I am sure that they will be welcomed as one of the few objective and scientific means of evaluating an institution that we now have at our disposal.

On the other hand, not even the most ardent friend of the testing movement would claim that the results of tests measure all that we expect our youth to get out of school or college. An English schoolmaster recently said that he believed that the education which a school boy receives out of class was more significant than what he secures in the classroom. Whether we agree with him or not we must agree that tests do not measure this aspect of the educational process very well, if at all.

In the same way the results of tests do not measure all that we expect a school or a college to be. Fond fathers and mothers, for example, want to know whether the social life of the school or college is healthful; the people of a community want to know whether their schools have adequate equipment to do the things they attempt to do; the constituency of a school or college wants to know whether the finances are being handled properly; in short, society, as I endeavored to say at the beginning of this address, is interested in the total pattern of an educational institution including that part of the educational process which can be measured objectively, that part which is imponderable, and even that administrative and physical machinery and equipment commonly regarded as necessary or desirable for an effective school or college.

I trust, therefore, that you will join me in regarding the accrediting of students through the testing and personnel movements not as a substitute for the accrediting of schools and colleges but as a supplement to it. Both are extremely valuable and important social devices operating for essentially different though supplementary purposes. While the accrediting of individuals may modify the methods of accrediting institutions and even be used as an important means to that end, it will never be more than one of those means. Society is anxious for the new ways of identifying the native ability,

the special interests and the achievement of individuals, but it is equally interested in ways and means of identifying the total effectiveness and the adequacy of the institutions which it establishes for these and other purposes incidental thereto.

If, now, we have passed the time when we ought any longer to depend upon standards which define the conditions under which a school or a college should operate as the best and most practicable method of identifying the quality of an educational institution, how then shall we proceed to do so? This is the problem which has faced the North Central Association in its attempt to revise its system of accrediting higher institutions. In order that a thorough study of this situation might be made the Association secured an appropriation of \$110,000 from the General Education Board to supplement a fund of \$25,000 which the Association itself is putting into the study. It is expected that the study will be completed at the end of the current academic year.

As yet we have no right to reach any but the most tentative conclusions. There is, however, one conclusion which, unless the evidence fails to justify it, has been rather widely accepted; and that is that the standards of the future will be general in character. This probability and the implications connected with it, together with certain other considerations, have induced me to attempt to set forth some of the main issues which will have to be decided before we enter a new era in the work of accrediting schools and colleges.

In order to introduce the subject, may I mention a possible standard on admissions for colleges and universities, "An institution should have a system of admitting students who are competent to undertake the work of the curricula to which they are admitted."

You will notice that in this definition nothing is said about high school units nor accredited secondary schools. In other standards I believe that it will also be possible to omit all specific requirements relative, for example, to 120 semester hours for degrees, minimum endowment and income provisions, the requirement for a minimum of eight departments and 8,000 books in the library, sixteen hours of teaching, and

the specification relative to Doctor's, Master's and Bachelor's degrees for faculty members. Even the word "standard" itself may enter the limbo of obsolete terms. If it remains, it will put off all of the old meaning of minimum specific requirements and take on the new meaning of a desirable ideal or principle toward the more complete attainment of which all institutions, even the best among the accredited ones, may strive continually. Minimum specific standards of the old type may always be realized rather easily by institutions with fairly good financial resources. Standards of the new type, like all ideals, are never completely realized by any institution; but they stand as a constant challenge for improved effort to all institutions.

In substituting general optimum standards for minimum specific standards, it is at once clear that there is no one royal way to realize the ideal set forth in the standard. In every case there is likely to be a variety of ways. Hence an institution will be fully at liberty to choose its own methods. In some instances the institutional machinery may be elaborate and formal; in other instances it may be possible for an institution to perform the function as effectively through machinery which is less imposing and much more informal.

If very full liberty as to ways and means of attaining a standard is extended, an institution may reasonably be expected to accept appropriate and accompanying responsibility. An institution should, therefore, in the process of accrediting, be able to demonstrate that its methods, its plan, or its organization are well considered and that they are effective in attaining the general principles called for in the standard, as they apply to the objectives which the institution has set for its goal. For example, to take an extreme case, I presume that anyone in visiting an institution would have real cause to question the practice of allowing engineering students to enter with no mathematics. Yet it is imaginable that even in an extreme case of this character, the institution has worked out well planned procedures for taking care of this situation. If it has done so, it will certainly be superior to the old minimum standard which simply requires fifteen so-called high school

units. The results of the procedures, not the procedures themselves, will be the test of the degree to which a standard is attained.

We cannot write standards in general terms and permit full liberty in methods of attaining them without at once laying ourselves open to a charge that the standards are so vague that they lack meaning. There will be annual demands for amendments. The officers of the accrediting agencies will be challenged constantly to interpret them so that institutions which are applying for accrediting and others whose status may be called into question may know "what to count on." After all, one of the reasons why we have our present type of specific standard relative to educational machinery is that the human mind, including that of college presidents and school principals, constantly attempts to express abstract qualities in concrete terms. We are forever engaged in the futile business of trying to solve all our problems in faculty meetings and in Congress by passing some specific rule which will do away with the necessity of considering a particular situation on its merits.

In this discussion I wish merely to make it plain beyond question that, if we wish to replace our present wooden standards with general optimum standards and the accompanying liberty of procedure to attain them, we cannot, at the same time, expect to satisfy the natural desire for definiteness. As the old proverb well says, "We cannot eat our cake and have it too." Even, therefore, if general standards are inevitably accompanied with some disadvantages in the sense that they lack definiteness, we shall simply have to accept this situation as a part of the bargain with the full resolve that we will at least give them a full trial. I see no other alternative.

With the adoption of new standards we must also establish accrediting procedures that are more scientific and much more carefully carried out. While some improvements have been made in our procedures in recent years, our methods of evaluating an institution are essentially the same as they were twenty years ago. In short, we have not taken advantage

to any considerable extent in our accrediting procedures of the newer, more scientific methods of evaluating an institution which have been developed during the last twenty years. At any rate we can all agree that there is great room for improvement and that under the general type of standards such improvement in procedures is all the more necessary.

I have discussed briefly the relation of testing individual students to future accrediting of schools and colleges. The testing movement may prove very helpful but I wish now to hazard the guess that the accrediting associations should not themselves engage in a comprehensive testing program in institutions which are applying for accrediting. They may, however, properly expect an institution to show that it has an active testing program and to make the results available. Information along these lines becomes an important part of the total information available about each school or college. Indeed, the greatest need in connection with improved accrediting procedures is accurate and comprehensive information about an institution. There must be a schedule of information from each institution that is much more elaborate and more searching than that which so far has been called for.

Next, I am confident that the one-man, one-day inspection should be abandoned, and that in the place of so haphazard a method at least two individuals, perhaps three, should visit each institution and that they should stay at least two days. I would have such a committee of two or three visit from six to twelve institutions each year. If possible, I would have some continuity as well as some change in these inspectors from year to year. The inspectors should secure the types of information which in their nature are not readily obtainable by questionnaire. On the basis of all available sources, objective tests, objective information as to institutional processes and characteristics, and the imponderable impressions gained by seeing the institution at work, the inspectors should be able to render a very dependable report. These reports will be based on much more adequate information and much more dependable impressions secured by at least two persons who can compare conditions at a number of institutions. If some

such plan as this were established, I believe the quality of the inspection process would be immensely improved.

My purpose in this discussion of procedure in accrediting is to emphasize as strongly as I can the necessity for placing the whole process on a much higher plane than it is at present. If accrediting is worth doing at all, let us do it on the basis of the best and most complete information that we can get; let us secure each year a limited number of persons of recognized standing to interpret the data, make the inspections, and render reports on a comparable basis. Who can doubt that if this is done, accrediting will be elevated to an entirely new plane in the estimation of the institutions themselves and of the general public? Moreover, I have always contended and I believe now that if we improve the accrediting process, including the inspections, in some such manner as I have described, it will convince people that it is equally important, if not more important, to emphasize quality in accrediting procedures as it is to do so in the standards themselves.

Standards of general character will be as valuable for purposes of stimulation to institutions already accredited as to those which are newly applying. As a matter of fact, they will probably be written more with these institutions in mind than for those newly applying. The old standards were minimum standards not in any way intended to portray ideal conditions. One of the sad things about past and present conditions is the fact that they have often been regarded by people as a sufficient and adequate ideal to be attained. We have had nothing in our basic principles or in our procedure to gainsay this impression. The new standards will be ideals toward the attainment of which the institution seeking accrediting and the one which has long enjoyed that status may work with equal zeal.

GEORGE F. ZOOK,
U. S. Office of Education.

The Administrator and the Testing Program¹

INTRODUCTION BY DEAN HERBERT E. HAWKES

It was a very great pleasure yesterday morning to welcome you to the first meeting of this conference, and I hope you have enjoyed the meetings between the meeting of yesterday morning and this one. It is also a pleasure to be here this evening with you, and to welcome our guest of this evening to this climax of the program.

I think it is a very good thing for us to get together once in a while and to address ourselves to the difficult task that is before us, for this conference marks another stage in the career of the Educational Records Bureau, the Cooperative Test Service, and the Progressive Education Association, all of which are responsible for the conference.

I suppose that we would all agree that our central problem is that of knowing and providing wisely for the needs of each individual in our schools and colleges. To say this is very easy. To do it even for one single individual is not easy. It is very hard.

I wonder why this task of learning the individual is so difficult. Why has it been so difficult for us to develop even the imperfect techniques that we have? Well, if it had been an easy or simple task, it would have been settled ages ago. In the natural and physical sciences it is the individual that is hard to learn.

Only recently has any one known or even suspected how complicated the individual in physical science—namely, the atom—really is. When I was studying physics the atom was a little hard ball; at least that is the impression that it made upon me. At any rate, it was so simple that nothing could be simpler. But now the one thing that cannot be understood or predicted in physics is the way in which the erratic little

¹ Presented at the Third Annual Meeting of Institutional Members of the Educational Records Bureau, New York City, November 3, 1933.

electrons shoot to and fro around the nucleus. Instead of being simple in its nature, the individual in physics is complex beyond all imagination.

When one deals with masses as the older physics did, it is comparatively simple to discover their laws of operation and relation. These masses which are made up of millions of temperamental little atoms follow fairly fixed laws. When one gets a sufficient number of unpredictable atoms in a mass their eccentricities smooth out under some kind of a law of averages and the mass seems to obey a law of heat or gravitation or optics. But in the development of science it was the study of masses that preceded by many centuries the knowledge of the individual atom.

In the study and measurement of personality, are we not facing something like the same situation? In the discussions of this conference we are trying to treat the problems of the individual. I do not know which is the more unpredictable and erratic, the individual atom with its shooting electrons and its central nucleus, or the individual temperament of the human being. In many young persons I can recognize something analogous to the darting electron, but sometimes find a little difficulty in detecting any nucleus or stabilizer for the individual. At any rate, I know that we are taking hold of a problem of such difficulty that we can hardly hope for more than a glimmer of light upon it. I cannot say that the laws governing masses of individuals—the nations and races of the world—are developed with the same clearness that is found in the case of some of the laws of physics. However that may be, I am certain that our difficulties are great.

The effect of a reflection like this should not cause one to give up. Quite the contrary. We should redouble our efforts to understand the nature of human character and temperament and to evaluate the result of human endeavor. If it is difficult, so much the greater reward and satisfaction for the little progress that we have made. If it is complex, more patience and tolerance is necessary on the part of everyone for the gropings of those of us who are trying to work in the direction of the dim light that is revealed to us.

Never for a moment can we afford to lose sight of the fundamental and everlasting importance of the individual human spirit and the solemn obligation that rests on each of us to try to understand and to measure progress both in mind and in character. Those of us in this room, perhaps more than most teachers and administrators, know the shortcomings as well as the values of the efforts that organizations like the Educational Records Bureau have been making for the past few years. It is easy for the unthinking critic to point out the inadequacy of our work. But what is the substitute for it? It is easy to lie down inert as if dead. In such a state one returns to the dust from which he sprung with a minimum of agitation or trouble. But it is baffling to live and to understand life. It is supremely important and interesting to try to do it. That is what the Educational Records Bureau and all of the agencies that are attacking this problem of the individual are attempting to do. And in that direction lies the hope of our profession and of the education of the future.

ADDRESS BY PRESIDENT CHASE

I HAVE been somewhat puzzled to find a title for this address. I am not competent to talk to you tonight about the details of testing programs and policies. I have, however, followed the enlarging scope of objective testing programs with a great deal of interest and growing confidence. I thought, therefore, that perhaps I would try to give you some of the impressions of an administrator in the field of higher education as he finds himself brought face to face with this developing movement in education.

Examinations are as old as the human race. It is easily possible to imagine that the Stone Age man, when he had reared his young to the point where they were filled with a proper amount of tribal knowledge, insisted on their answering any ten of twelve questions, and graded their replies as worth ten points each, if indeed he could count so high. Anyhow, from that day to this, examinations have been an integral part of the process of education. Institutions of all nations have specialized in various refinements of such torture,

developing new instruments with something of the loving care of a mediaeval execution. To most of us those frightful hours that we spent in session with men who examined us for the doctorate will always remain a fresh and vivid memory. I, personally, have always had great sympathy with the college president who waked up one night from the awful nightmare that he was being compelled to pass the entrance examinations to his own institution. As a teacher, I have done my share to contribute through examinations to the termination of college careers on the one hand, and to Phi Beta Kappa on the other. I have listened to endless debates as to how often examinations ought to occur and how long they ought to be and who ought to be given a second chance. As an administrator, I have known many kinds of examiners. I have known instructors who frankly used examinations as means of proving to students that their subject was too difficult for any but the highly exceptional mind to comprehend. I have known others who with equal frankness used examinations as means of rescuing the perishing who otherwise might have flunked the course and interfered with the popularity of the teacher. I have sometimes speculated on the influence of such factors as indigestion, domestic quarrels, late parties and first of the month bills on examination grades. I have seen something of what happens when the same paper is given to a number of different people to grade. I have seen all types of examinations. I have known of fraternity houses that stocked up on examination papers for ten years past, and I have understood that sometimes they have found that examinations recurred in cycles like depressions. I knew a teacher, who, year after year, gave the same examination, which consisted of one question, namely: Trace the development of this course as outlined in the lectures.

I have known plenty of students whose knowledge of a course was born the night before the examination and died a painless death the next afternoon. In short, I suppose that my experience has been typical of those who have watched this process with some interest. This business of examinations, then, is something to which the human race is prone. One

must suppose that it grows out of some very deep-seated need in human nature. In the days when people believed in instincts, I suppose that we would have said that it was an examining instinct, that the situation consisted of a more or less helpless student nearing the end of a given section of his work, and the response was a composition on the part of the instructor, of certain puzzles which tended to produce highly emotional reactions in the cortex and sympathetic system of the sufferer.

I have been talking, of course, about subjective examinations which are set by individuals in terms of a judgment of individuals. That is the usual way, I suppose, in which most people think about examinations. The instructor in his best judgment, when a particular date on the calendar arrives, makes up a series of questions that in his judgment cover the important points of his work and then he grades the replies according to his best judgment, depending on the scale of values that he himself thinks proper, and doing his best to apply these impartially. This is what we may call the examination procedure in its simplest form. The actual results are subject to many conditioning factors. In the first place they are subject to the accidents of the student's mental, physical and emotional condition at the time when the process takes place. But these factors of variability are even less important than those which affect the instructor. He must, in the first place, make his examination papers. The institution has a passing grade and he must make an examination which will allow a reasonable number of students to attain that grade. He must make it without any actual knowledge of the relative difficulty of the questions which he asks or of the way in which they measure what he wants to measure. He is like the physician who starts out to examine the patient as would the old country doctor. The fact that sometimes an individual of experience and shrewdness got highly accurate results by such methods does not deter us from recognizing the immense step forward which has been taken by modern medicine with the objective equipment at its disposal.

In just the same way, teachers of experience and mental

balance operate sometimes wonderfully well on the highly individual basis which I have been discussing, but at its best the old type of examination remains in the region of opinion. Countless individual factors on the part of the instructor can and do enter in to determine his judgment. Sometimes these are not limited to himself. His standing in the department or in the institution may be involved. Even public pressure may enter as it does in some communities, for example, in which it is more or less an accepted theory that any student who shows sufficient perseverance to stay in high school ought to be allowed to pass sufficient examinations to graduate.

The difficulties of this situation have of course been recognized for many years. An attack on the problem in one sector was made a generation ago in the attempt to overcome the difference between the standards in different schools by state-wide examinations in secondary schools and the college board examinations for college entrance. Such procedures do away with the formulation of examinations by the individual without check or control. But the formulation of the examination and its evaluation still remain subjective and the decision still turns on the condition and status of the individual student at a given moment which may or may not fairly reflect his ability.

While these procedures mark a real advance, one is still dealing with the attempt to measure important things in terms of judgment and opinion. Psychology, like medicine, began a generation ago to swing over to the objective technique of measuring. Apparatus for measuring blood pressure, X-rays, and mental tests came into the world at about the same time. Both sciences began to conceive the idea that it was possible to measure things which heretofore had been subjects of guess work. Twenty-five years ago Binet was popularizing the idea that it was possible to measure the age levels of children in terms of standard norms, and Thorndike and others in this country were developing techniques for measurement of mental traits. The war, which brought forward the army tests, gave a great impetus to the movement in this country, and at the close of the war, institutions began to adopt such tests, mostly at first, for entering freshmen. Naturally, such single measurements had

grave limitations, and some of the hopes pinned on them failed to materialize. Interesting and valuable results, however, have come from the large and representative group of institutions which has used these freshman tests over a period of years, and the educational value which they have had for college faculties and certain sections of the public, has been very great.

I need not rehearse here the work done by the organizations that are sponsoring this conference which has grown out of the realization that the transfer of our thinking about examinations from the subjective to the objective status was a problem which had to be attacked with great care and infinite labor. The growing recognition of the work that is being done by these agencies, the slow but steady education of sections of public opinion which are involved, are familiar to all of us. What I wish to do is, rather, if I may, to spend a few minutes in an attempt to evaluate from the point of view of an administrative officer, the situation which now exists.

In the first place, the social and the economic situation which confronts us is one which is rapidly bringing to the front the question of what is to be done with our young people *en masse*. It seems fairly apparent that the years up to maturity are ceasing to be productive for industry, and that they must be used in any rational system, more and more for education. That is the direction in which it seems to me we are headed. I cannot conceive that public opinion will be content both to exclude young people from work and from school. The result will be a series of demands on education at the secondary and college level which, in my judgment, are destined to work profound changes in our traditional conception of education.

We have been confronted in America with a rather curious situation at the secondary and higher levels. For many years the public has attempted to establish varied types of educational institutions. At the secondary level, it has established technical and commercial high schools, and it has developed a variety of types of institutions for secondary school graduates. Normal schools for the training of teachers have a long history. Under the impetus of the Morrill Act in the

sixties, institutions were established for the training of students in agricultural and mechanic arts which were obviously intended to be quite different from colleges and universities. We have been very prolific in founding institutions intended to meet the needs of students of a wide variety of interests and capacities. But the interesting fact is that any of these, once they have been established, have yielded to the pressure to become educationally orthodox. Technical high schools have developed into college preparatory institutions. Normal schools have become colleges, and agricultural and mechanical colleges have striven to become universities. In other words, it has proven exceedingly difficult to break away from the traditional existing pattern in secondary and higher education.

As has been said by others, our American idea seems to have been not only that we should give everybody an educational opportunity, but that we should give everybody the same kind of educational opportunity. Now I do not believe that we can much longer continue on such a platform. We must attempt to clarify our conceptions. This is a matter of the greatest social consequence. One has to recall, I think, that the enormous growth of education at secondary and higher levels is a very recent phenomenon. Since 1900, there has been an increase of 600 per cent in students enrolled in institutions above the secondary level, and an even larger increase in the population of our secondary schools. We have been going through a period in which we have been trying desperately to enlarge our facilities in order to deal with this enormous expansion. We have done this in general along the traditional lines. Some colleges and universities have made distinct progress in a genuine selection of students. Others have talked about it in catalogues and literature but have failed to give the Registrar's office, apparently, the contents of such bulletins. On the one hand, we find a group of people who insist that too many students are going to college. I think this is too simple a statement of the problem. If we consider the matter in terms of the traditional college curricula and programs, we will all agree, I am sure, that there are many students in our colleges and universities who should not

be there, for such facts as are being assembled seem to indicate that there are probably an equal number of high school graduates who are not in our colleges and universities who could profit by attendance at them. There are many misfits; there is much human waste. These things are obvious to us all.

I am not wedded to the existing type of college curricula. I think we are not doing anything like as good a job as we could with our present knowledge and resources. There must be definite reconstruction but there must be more. There must be genuine differentiation in terms of the abilities and capacities and interests of students. We need to think less about educational orthodoxy and more about this great social problem of constructive work for the needs of adolescents of widely varied types of background and ability. This is one side of the problem. We need a system in secondary and higher education to deal in terms of the great task which will increasingly confront it. The other side of the problem has to do with the means of insuring that the individual finds his proper place in such a system. I mean that he must be so located that he will be doing the kind of thing that he is fitted to do. In this respect judgments are customarily made on the basis of unchecked opinion. In the days when I was a dean, I remember that a boy's mother came to see me one day because her son was in trouble as a freshman in the engineering school. It was not a matter of much difficulty to find out that his trouble came out of the fact that his ability in mathematics was extremely low. This interested me and I asked her how it was that with that make-up he had decided to enter an engineering school. "Well," she replied, "a year ago we were having our house wired for electricity and John was immensely interested in what the workmen were doing, so we thought he probably would make a good electrical engineer."

That is just about as intelligent as much of the vocational guidance which has gone on. We cannot afford to continue at that level. What, therefore, can we do? It is for the answer to that question that those of us who are concerned with administration in our colleges and universities must look to the programs which are being developed by these groups

of yours. It is in terms of such programs, for example, that the University of Minnesota has already set up a Junior College whose students are really selected. May I pause for a moment to say that this is a real example of selection. When we talk about selecting students, the public ordinarily conceives of this process as being a selection of those with the highest degree of intellectual ability. This is one misconception that it seems to me needs to be corrected. If the public is to be enlightened on the meaning of a really selective program, you offer us things in which all of us ought to be very much interested.

In the first place you are developing tests which are objective in character. In the second place you are shifting our viewpoint away from the idea that a single test or series of tests which measures the individual's status at a given moment is in any way conclusive. One gets into curious situations in that respect. I remember in one southern state, where a program of objective tests for high school seniors had been developed in a purely exploratory and advisory way, I was interested in the fact that a student of considerable ability who had come on to the university and was doing well there, ranked down very close to the bottom in the tests which he had taken as a high school senior the spring before. I asked him about it one day and he said that the tests were given on a day when they had the only considerable snowstorm that they had had for several years. They knew that nothing depended on the results of the tests and there was a snowball fight arranged to take place at the earliest possible moment. Under such circumstances vocational guidance gets a bit mixed. What you are doing, however, and have been doing increasingly, is to stress the development and the factor of growth with the clear understanding that the value of objective tests is cumulative and your tests give comparable results. When they are given under properly controlled conditions, individual factors play no part in their evaluation. One knows something about the actual achievement and ability of a student whether he comes from New York or Minnesota.

It was inevitable that ideas like these opposed as they are

to long prevailing and traditional practices should meet with the resistance due to inertia, skepticism and ignorance. It is only a few years ago that in the course of a correspondence, I received a letter from the president of a large American University, in which he declared offhand that psychological tests were bunk. I have no doubt that he and many men of his generation still think so. I know that a good many members of college faculties still think so, and yet there are abundant signs of a widely awakening interest in your program.

The Cooperative Test Service of the American Council on Education has won financial support for a period of years from one of the educational foundations. The Committee on Educational Testing of the American Council is coordinating and promoting large scale testing programs. The Educational Records Bureau has developed a membership since 1927 from twelve schools to something over two hundred. The Progressive Education Association is carrying on an experiment that we are all watching with great interest. The College Entrance Examination Board is giving objective scholastic aptitude tests. Of the larger programs, the study in Pennsylvania is, of course, outstanding. Iowa, Minnesota, Wisconsin, Ohio, Indiana and Kentucky have all organized state-wide testing programs. Other states, like North Carolina, have been carrying on simpler programs for some years and other states, I understand, are rapidly awakening to the situation. It is, I think, most heartening and hopeful that the movement should have reached such a point at a time when I believe the demands on it must rapidly multiply. Conversion comes, to be sure, slowly. One is reminded sometimes of a story of that opponent of Galileo who was told that the astronomer had discovered through his telescope the fact that Jupiter had moons. This was so upsetting to the gentleman in question that Galileo asked him to look through the telescope and see for himself. He refused, you remember, to do that because he said Jupiter had no moons and he was sure of that fact and if he saw anything through the telescope that looked like moons it would simply be an illusion.

There are many people who still refuse to look through this

telescope. I was talking one day with the head of a large department in another institution about certain objective tests that had been developed in his subject. His answer was that he had all those tests in his files and that he had never used them because they didn't look to him as though they would be any good.

I should like to make one suggestion. It seems to me that the results now obtained and the general status of the whole movement are such that the entire question of objective testing and its importance should be interpreted to the public with a good deal of reiteration and persistence. I have been very much interested, for example, in the recent article by Professor McConn reprinted from the EDUCATIONAL RECORD for October, which brings together a good deal of the material in the field in a simple and comprehensive way. I am wondering whether other more definite attempts should not be made to reach the administrative officers of our colleges and universities. For example, I know of no manual that brings together in unified fashion brief accounts of the character and results of the various objective tests in a way that gets the movement as a whole before administrative officers. Such a publication may exist. I do not happen to have seen it. Publications in technical educational magazines seldom get into the hands of most of the group in higher education who are influential in formulating faculty opinion and procedures. This is unfortunate. I would suggest publications in periodicals of a more general character and even in the popular magazines in an attempt to inform intelligent public opinion more thoroughly. It seems to me, one danger which such a program as this has to avoid is that its enthusiastic adherents will devote their main attention to educating each other, forgetting the great problem of public education which is involved. In spite of the spread of understanding of this work, my observation is that there is still a great deal of ignorance in quarters where there should be more information as to its meaning and its results.

This is, I suspect, as good a point as any on which to close. If this speech seems to you to have brought in everything except the kitchen stove, I would ask you to remember that I am

giving some reactions to your program as an interested outsider who has the temerity to say a good many things about matters with which you are far more familiar than he could possibly be. I thank you for the patience with which you have listened and I am convinced that on your program hang issues so important that no legitimate means should be overlooked in forwarding its success.

HARRY WOBURN CHASE,
New York University.

Religious Instruction at the University of Michigan¹

A FAMILIAR criticism of the large modern university is that it is too large and as a consequence gives too little attention to the individual student. A little thought reveals the fallacy in the conclusion. An organization, like an organism, may be large without being ungainly and inefficient. While it may thus properly be insisted that bigness in an institution is not necessarily accompanied by neglect of the individual, it should also be appreciated that with institutions, as with individuals, the activities and growth must be balanced and coordinated if overgrowth and retarded development of parts, and in general a disproportioned, loose-jointed product are to be avoided. Furthermore, the unbiased educator should be the first to admit that our teachers and administrators have not, in recent years, devoted enough attention to the spread of instruction in our institutions of higher learning. Stress has been placed upon aptitudes to the neglect of spiritual growth and unified development. It has not been fully recognized that the final and net result of the educational process should be a well-rounded individual, a person trained to maintain his physical well-being and to grow continuously both mentally and spiritually.

Such an orderly and comprehensive growth process need not be inhibited in a large university. In fact, it may receive its greatest stimulus in the complex environment provided by our largest schools. The required conditions for the fullest measure of unified development are opportunities in the form of mental food, intellectual exercise, and experience in proper proportions. Upon educators must rest the entire burden of outlining a coordinated program of instruction in social living and much of the task of removing man-made obstacles from the path of the student. I propose on this occasion to discuss

¹ Address delivered at the annual meeting of the National Association of State Universities, Chicago, November 16, 1933.

attempts being made at the University of Michigan to stimulate and guide the spiritual growth of the student and thus to assist him to obtain an integrated view of man and his world.

It will scarcely be disputed that a working philosophy of life, to be adequate, must represent the adjustment of the individual to his environment and that, for man, the environment is in part a social one. Because of the complexity of the environment and the diversity of individuals, no one approach to life's problems is adequate. The individual needs a complex equipment in the spheres of science, the humanities, religion, psychology, philosophy, and contemporary living to realize a full life. Furthermore, to be useful this equipment should be integrated into a personal religion. This being true, religion may both be derived from and expressed through personal trial, observation and practice in communal living, formal study of human experience in the religious field, and counsel and personal guidance in thinking. These approaches and guides to character growth are needed throughout life and are particularly necessary in the college years. The plan now being matured in the University of Michigan takes advantage of all of them.

INSTRUCTION IN THE PROBLEMS OF COMMUNAL LIVING

In no area is the college graduate more handicapped by lack of experience than in the broad field of human relations. If he is a doctor he has had hospital practice. If the law is his specialty, he has had opportunities to use his knowledge in a practice court. If he is a graduate in dentistry, he has had clinical experience. If he is a biologist, chemist, or physicist, he is familiar at first hand with laboratory techniques. Of the social problems with which every citizen is faced and on which he will be required to pass judgment, the recent college graduate, however, has at best only an academic knowledge unless he has been trained to be a specialist in some part of the field. As a consequence, the alumnus is often little more inclined than anyone else to act upon knowledge and reasoned judgments rather than upon his emotions in the field of human relations. Training in skills has been developed but there has been a failure to provide in our institutions of higher learning prac-

tical experience as a basis of coordinated thinking upon life's essential problems. Leaders seem to be slow to realize that they can no longer separate science and religion, philosophy and living, faith and works. Somehow, for each student, the fundamental thought in all fields of human knowledge must be drawn together into a unified body, and this thought must be enriched with experience, if our colleges and universities are to be successful in developing an appreciation, if not the realization, of a good life.

On the theory that experience is as necessary in the growth of a well-ordered, practical or social religion as in any human activity, the University, a year ago, began a controlled experiment to determine the feasibility and best methods of providing this experience. With the aid of the Earhart Foundation, selected groups of students are organized under the general direction of Dr. Roderick D. McKenzie, Professor of Sociology. Supervised by advanced students and instructors, the undergraduates have been brought into immediate contact with the various problems which arise in communal living, and through the medium of seminars have exchanged views with their fellows. The results have been so satisfactory that the experiment will be extended to include more students and a broader array of contacts. The project is not designed to train specialists, but to develop community leadership. It is limited to no one group of students and theoretically every student may, and should, elect the work. Since, however, not every student can be seriously interested in the program, and facilities are limited, careful selection of those to be accorded the privilege of pursuing studies in this field must continue to be the most practical plan. It is believed that the project gives promise of supplying laboratory training under skilled guidance which will go far toward giving the student the first hand knowledge of social problems which he has not previously had, and thus, to some degree at least, promote better, because more intelligent, citizenship.

FORMAL INSTRUCTION IN RELIGION

The second desirable facility in the evolution of a personal philosophy which I have listed is the opportunity to secure

religious instruction. There is a common fallacy extant to the effect that the state university gives no formal instruction in religion. No institution of higher learning could correctly be called a university which did not offer courses contributing to a knowledge of religion in the broad meaning of the term. Sectarianism, in the sense of exclusive or undue emphasis in instruction upon any one body of doctrine, is not permissible, but this does not mean that the teaching of religion must be deliberately heterodox, irreligious, or nonconformist. The University of Michigan is designed to be a liberal, cosmopolitan, and comprehensive school. In religion it is pro-nothing and anti-nothing, but Catholic and Protestant and Jewish and Mohammedan and Buddhist, and every other faith with a philosophy worth study and adoption. Such subjects as the nature of religious experience, the history of religions, and the philosophies of religious thinkers, properly find a place in a curriculum designed to provide cultural opportunities, and it must be insisted that religious thinking like all other kinds must be informed. One cannot wisely ignore in instruction the fundamental fact that faith is not a substitute for but the fruit of knowledge.

In some schools courses in religion are scattered widely among departmental offerings, while in others they are grouped into a department or school of religion. Neither plan is satisfactory. It is believed at Michigan that the courses should be grouped to make them easily available to the student, but that to make them the basis of a separate department is to professionalize a subject which should exist rather as a general university offering. It is to be hoped that the University can soon print an announcement of courses in the essentials of religion open to all students, and that this curriculum, leading to no degree, can be reasonably expanded in the near future.

THE COUNSELOR IN RELIGIOUS EDUCATION

As a third facility in character training, there is needed in the large universities a counselor in religion—a leader and correlator of religious expression. It should be the chief duty

of this man to keep himself available to the normal student who is seriously concerned with developing a philosophy of life. The period of adolescence is one of stress and strain and the college years are particularly a period of concentrated learning to think for one's self. It is, therefore, to be expected that the serious minded undergraduate will frequently find himself in the midst of mental difficulties, bewildered, and in need of adjustment. Sometimes he will be willing to seek aid from his teachers, but often he will need more time than an instructor can give him to work through and feel through his period of tension and spiritual growth.

The need of a counselor in this field is now rather generally recognized. In the University of Michigan plan he will be given greater responsibilities. It is believed that the University should assist the churches to coordinate and develop religious instruction. The plan of ignoring the local church by creating a university church has obvious disadvantages: the student, particularly if it is recognized that after college he must usually affiliate himself with some denomination if he is to continue his religious training. Similarly, there are serious objections to the plan sometimes proposed of controlling instruction in this field by bringing into the University the structures and curricula of the churches. Finally, it has been amply proven by experience that without some point of contact with the University the educational agencies of the churches are largely ineffectual. Based upon these considerations, "Counselor in Religious Education" at Michigan will advise students and, in addition, will serve as a liaison officer between the University and the churches. He will be expected to assist the student in making church contacts, to aid the churches to develop curricula which will meet the needs of the student and to integrate his activities with the attempt being made to provide practical training for community leadership.

CONCLUSION

The program just outlined in no way takes the place of the instructor-student relationship so important in forming character; nor will it conflict or interfere with classroom instruction.

tion. In the several disciplines, we are attempting to develop open, critical, and cultural attitudes of mind. The difficulty encountered is that, owing to a necessary specialization, there is a tendency to emphasize particular approaches to the problems of existence. It is often not possible in a course to recognize fully that each individual must have his own philosophy, that the acquiring of a philosophy is a lifelong process, and that education can only be considered well-rounded when it has taught the student in his thinking to go beyond analysis, beyond memorizing, beyond conventions, beyond material considerations, beyond particular disciplines, to synthesis, to creative thinking, to an appreciation of human values. Valuable and indispensable as it is, the classroom work must be supplemented, for the student must learn to use all the approaches to the study and understanding of life afforded by the several fields of knowledge, must know the facts of social living, and above all must be taught the lesson: "It is the most beautiful truth in morals that we have no such thing as a distinct or divided interest from our race" (Bulwer).

ALEXANDER G. RUTHVEN,
University of Michigan.

Coordinated Examining and Testing Programs¹

INTRODUCTION BY DEAN HERBERT E. HAWKES

I would like to call the conference to order. This is the second educational conference called by the Educational Records Bureau, the Cooperative Test Service and the Commission on the Relations of Schools and Colleges of the Progressive Education Association. The fact that you are all here indicates that there is interest in the kind of thing that we are talking about. It seems to me that a conference of this kind is in the nature of marking the direction of the movement. I don't say that we are crusaders—it would be embarrassing to some of us who were brought up in the conservatism of New England to appear in that rôle—but at the same time I think we all recognize that we are taking part in a movement. And we all know what that movement is. It seems to me to be in the direction of looking at our jobs intelligently, which again, it seems to me, is in contrast with certain traditional attitudes toward the job of the college and school administrator. What we are trying to do, in a word, as you all know, is to get some means of finding out what kind of human material we are working with, and then devising some means of using or bringing to bear upon this human material instruments and tools that are adapted to that material. If we were engaged in any mechanical operation of any kind that would be too silly to mention—but it has taken us a long while in education to get that very simple position, and as you know there are very many agencies through which this movement is being carried forward. Three of them are represented in the calling of this conference. The opening address will be pronounced by Dr. Wood, who occupies a somewhat strategic position in regard to this whole enterprise. Two of these cooperative bodies

¹Opening Address at the Second Educational Conference on Testing Programs, New York, November 2-3, 1933.

are the Cooperative Test Service, which was organized three years ago, and the Educational Records Bureau. The Cooperative Test Service, which has the responsibility and privilege of making various kinds of new type tests in subject matters, grew out of the work of a committee of the American Council on Education. I have told this story so many times that I am sure I don't have to repeat it. That committee was organized in 1923 and struggled for three years in order to find out just where they could take hold of the problem that confronted them. As we look at the problem today, it seems amazing that it should take as long as that for eight or ten men of obvious intelligence to find out how to tackle this problem which is now taken as a matter of course. But we finally got hold of three or four projects which were carried forward and out of one of them has grown the Cooperative Test Service, which is doing work many of you are familiar with. Dr. Wood is Director of the Cooperative Test Service and is now also Director of the Educational Records Bureau. In a certain sense the Bureau has been looked upon as the service end of the Cooperative Test Service. The Cooperative Test Service prepares the examinations and to a certain extent the Educational Records Bureau sees that the schools and colleges come in contact with them. The Bureau has not yet grown to anything like the dimensions which its opportunities and its philosophy indicate it ought to grow to. Whether it will or not depends upon the financial situation. I may say under my breath that the whole trouble is that all this costs a lot of money, and the question is whether it is in the luxury class or whether it isn't. I am sure that somebody in the course of the day will say that now above all other times, when money is hard to get, we should use our money wisely in the process of finding out whether this or that boy or girl can profit by the sort of education we are providing.

But I must not ramble on, since we have three speakers this morning, the first of whom is Dr. Wood, the Director of the Bureau and of the Cooperative Test Service.

ADDRESS BY DR. BEN D. WOOD

I OFFER sincere thanks to the Board of Directors of the Educational Records Bureau for the honor of my appointment as Director of the Bureau, and for the opportunity it confers upon me to collaborate more closely in an enterprise which I have long considered one of the most important and promising among current educational efforts. The acceptance of this new task would have been much less easy if I had not known in advance that those who have brought the Bureau to its present status of effective service and great promise could be counted upon to continue helping us with their usual efficiency and devotion. As I have watched the Bureau grow since it was founded in 1927, from a membership of only a dozen or so schools to its present membership of over 200, as I have watched it encounter and overcome difficulties large and small, it has become increasingly apparent to me both that the basic programs and philosophy of the Bureau are sound, and that all those whose cooperation has brought about this progress deserve our congratulations and grateful thanks.

Among the institutions that made possible the founding and continuation of the Bureau, the first to be named must be the Keith Fund. The trustees of the Keith Fund not only made several grants of funds, but have given generously of their counsel and wisdom throughout the life of the Bureau. Particular thanks are due also to the Carnegie Foundation, whose Division of Educational Enquiry has made such large and essential contributions as to defy brief mention, and to the Carnegie Corporation, whose help at a crucial time saved the day. No account of our indebtedness could be remotely adequate which did not include mention of the American Council Committee on Personnel Methods, whose indefatigable and large-visioned chairman has been Chairman of the Board of the Educational Records Bureau for the last three years, and also chairman of an increasing number of related projects. It is no more than reciting an historical fact to say

that the survival of the Bureau during these last three years on a self-supporting basis is largely due to the wisdom and devotion of the Chairman and members of the Board of Directors, and to the generosity of Columbia University in furnishing quarters.

Nor could any acknowledgment be complete without mention of the headquarters staff of the Bureau, which, starting with a small and crudely equipped office in 1927, has built up an organization which has demonstrated its capacity to handle with a high degree of accuracy and speed the scoring and reporting of hundreds of thousands of tests each year, with all the correspondence, the advisory and interpretive work implied by such testing service.

It is a pleasure to me to offer thanks and congratulations to each and all of the institutions, groups, and individuals thus far named, because it is what they have done and will continue to do that constitutes the foundation of my hope for meeting with some measure of success the responsibility which the Board has thrust upon me. But there is another group of institutions whose cooperation in the past deserves our unmeasured thanks, and whose cooperation in the future will be the measure of the final success of the Educational Records Bureau and of related projects. I refer to the schools that have, year after year, in the face of the greatest difficulties and stringencies, participated in the testing and guidance programs and activities of the Bureau. It is obvious that, without their intelligent cooperation, all else would have gone for naught; and without their continued active support the admirable results thus far achieved, with their promise of far greater and more enduring gains in the immediate future, will be largely dissipated.

The great majority of the schools whose active cooperation has made possible the progress thus far achieved by the Bureau have been and are the independent schools, the enlistment of whose interest was due, in great part, to the vigorous initiative and abundant enthusiasm of Mr. Charles K. Taylor, the first Director of the Bureau. In this work the independent schools have added another notable chapter to

their already enviable record for initiative in formulating, trying out, and adapting fruitful innovations, in inaugurating sound reforms, and in lessening the burdens and mistakes incident to transitional periods for other schools that follow in the progressive path they have blazed.

While the main burden of the Bureau's program has been carried thus far by the independent schools, the public schools that have been actively cooperating have made notable contributions to the project in spite of the lesser flexibility of budgets, curricula, and procedures that has thus far characterized publicly supported institutions. Perhaps the greatest contribution of these few public schools is the concrete demonstration they have provided that tax-supported budgets are not so inflexible as to restrict their attack on the basic problem of guidance to fruitless gestures and pious declamations. The pioneer example provided by the public schools of Providence, and the more recent innovations in the public schools of Tulsa, Oklahoma, which have followed closely the models set up by Providence, by the Pennsylvania Study Enquiry schools, and by the Educational Records Bureau schools, are being watched and studied by a rapidly increasing number of public schools and public school systems all over the country. The statewide high school-college programs in Iowa, Minnesota, Wisconsin, Indiana, Ohio, Kentucky, Colorado, Alabama, Georgia, Mississippi, and North Carolina, and the rapidly maturing plans in a dozen other states, are encouraging beyond anything the most optimistic dreamed of even as recently as five years ago. The most extensive and inclusive of the statewide projects is the Iowa program, and the most significant and encouraging thing about that program from the viewpoint of the Educational Records Bureau is the fact that plans are under way now for making the cumulative record an integral part of that program in essentially the manner advocated by the Educational Records Bureau.

That the colleges are also alive to the basic importance of guidance, and to the principle that constructive guidance ultimately depends on accurate and comparable measures of individual growth in capacity, achievement, and interests, is amply

indicated by the studies of the Educational Records Bureau and Progressive Education Association commissions on secondary school and college relations, by the studies of the Committee on Educational Testing of the American Council on Education, by the history of the North Central Association, and by the aggressive, recent actions of the college associations and of individual colleges in such states as Minnesota, Wisconsin, Iowa, Kentucky, Colorado, and Wyoming, and the contemplated actions of college associations in New Mexico, Texas, Georgia, Washington, and several others.

There is more than ample reason for optimism when we see independent schools, public schools, and colleges all over the country working together in an increasingly harmonious and widespread cooperation on a basic educational problem which is inherently a problem of coordination and cooperation. In a more immediate sense, it is equally encouraging and gratifying to note cooperative tendencies among the several agencies and organizations that have thus far carried the burden of coordinated examining and testing programs. While there are still differences to be reconciled, both between and within examining agencies, they are largely differences of emphasis and of detail. With the growing realization on all sides that the welfare of the growing individual in a changing society defines the common interest of all agencies and individuals in educational work, and with the sobering realization that even with the utmost cooperation there will still be difficult problems of technique, of organization, of procedure, in sufficient numbers to challenge the best efforts and wisdom of all who work in the field of personnel and guidance, it seems reasonable to hope that effective coordination among examining agencies will be realized in the not distant future.

The two fundamental questions that confront us are, first, the purpose of examinations, and, second, how to use them to serve that purpose most effectively. Our philosophy of examinations and methods of using them have been and, so far as practice is concerned, are still dragging far behind the technical developments in the construction and scoring of tests, and in the interpretation of their results. In developing the scholas-

tic Aptitude tests, the College Entrance Examination Board has made one of the most outstanding contributions of the decade. The more definite meaning of the Scholastic Aptitude test scores and the comparability of their measures year after year are already recognized as an important milestone in technical development. In the older field of subjective achievement examinations, the College Entrance Examination Board for several decades, and the Secondary Education Board since its more recent organization, have exploited the unique potentialities of such examinations with a degree of carefulness that approximates perfection, as far as perfection is humanly possible, and with a degree of success that is nothing short of remarkable. Recently the College Entrance Examination Board has inaugurated some even more promising technical improvements which may turn out to be as epochal in ultimate influence on education as the original organization of the College Board.

In the field of objective achievement tests great progress has been made, largely by a fusion of the recent technical developments in the details of test construction made at the universities of Iowa, Wisconsin, Minnesota, and Ohio. The Co-operative Test Service, under the leadership of the American Council on Education Committee on Personnel Methods, with the collaboration of the Educational Records Bureau, the Pennsylvania Study of the Carnegie Foundation, and many schools and colleges, and with the aid of a ten-year subvention from the General Education Board, is well on the way toward supplying one series of achievement tests in the basic subject matters of junior college and high school levels that will yield measures which are comparable from year to year, and which thus make possible the study of growth in the functions measured by the tests.

While practice still lags far behind these technical developments, and the philosophy of examining implied by them, it is gratifying to note a much clearer and a much more widespread understanding of a constructive philosophy of educational measurement, and a rapidly increasing disposition all over the country in all kinds of schools and colleges to make these

technical advances serve constructive educational purposes throughout the whole educational ladder.

The purpose of examining is not to enforce arbitrary curricular prescriptions regardless of the interests and needs of individual students; it is not to impose arbitrary or uniform standards on heterogeneous masses of students regardless of their capacities and ultimate places of service in society; it is not to create by authority, coercion, teaching magic, or ritualistic servitude, intelligence, reasoning powers, and creative forces in contravention of the manifest will of Providence. The primary and basic purpose of examining is to help the schools ascertain in meaningful terms the achievements, effective interests, and capacities of individual pupils in order that the schools may more surely lead them to their most effective self-realization in the life which they are to live. More briefly, the purpose is to help schools find and meet the needs of individuals in a complex and changing society.

The method by which examinations and tests can serve this purpose most effectively is essentially the method which has been so clearly demonstrated in actual practice by the Carnegie Foundation in the Pennsylvania Study, by many member schools of the Educational Records Bureau, by the public schools of Providence, and a few other cities—a method which has been advocated by the American Council Committee on Personnel Methods for nearly a decade, and which accounts for the organization of both the Cooperative Test Service and the Educational Records Bureau. This method has been identified by its central and unifying instrumentality, the cumulative record of measures and observations recorded in comparable terms in a form convenient for rapid, accurate, and comprehensive interpretation of growth trends, which is to be used carefully and continuously if not prayerfully by all who take the responsibility of advising pupils.

There are three features of the cumulative record worthy of mention here. The first is the physical form of the record, which is arranged in calendar unit columns that facilitate the detection and interpretation of trends in particular lines of

development, and also display cross sections of the individual's whole recorded status at any one time.

The second and far more important feature of the American Council cumulative record is the emphatic plea which it makes for the use of measures which are sufficiently comparable from year to year to give reliable and meaningful indications of the extent and rate of the individual's growth in each of the functions tested or observed. Since education is essentially growth, no record can be called educational which does not throw some light on the character and extent of the pupil's growth in intellect, in important types of achievement and interest, and in personal traits.

The third feature is the great emphasis which the American Council record puts upon the study of the interests and personal development of the individual. The record form provides spaces for objective measures of interests and personality traits, such as those yielded by the Strong and Bernreuter tests for high school and college students; but it provides much more space for records of concrete evidence of interests and personal developments, and of teachers' judgments, regarding the attitudes and intellectual habits of pupils. With the improvement in personal rating scales suggested by the American Council Committee and other committees, and recently achieved to a considerable extent by the Progressive Education Association Committee on Records and Reports, this feature of the American Council cumulative record, and its now numerous revisions and adaptations, will assume even greater importance.

While all three of these features are important, since the first is a great deal more than a mere mechanical convenience, the last two represent the gist of the method. We have had cumulative records for many years, but by and large they have contained little or nothing beyond the subjective and highly individualistic judgments of teachers expressed in the ambiguous terms of letter grades or percentages. Such information as they have contained has been so ill-defined and so lacking in comparability as to be of little use in the long-term educational guidance of pupils.

The Educational Records Bureau and the Cooperative Test Service are dedicated to the task of making it possible and convenient for schools to secure information that is significant and which can be recorded in terms that are meaningful and comparable year after year—the Cooperative Test Service by providing comparable tests, and the Educational Records Bureau by providing coordinating and interpretive service. In this work both organizations have enjoyed the cooperation of many schools, colleges, and other examining agencies. Most of what success we have enjoyed has been made possible by that cooperation, and by the resulting coordination of efforts of many workers.

Thus, while many and difficult problems lie immediately ahead, the gratifying progress already achieved and the promise of greater gains in the immediate future, and my confidence in the continued cooperation of all those who have brought about the present promising outlook, encourage me to accept with high hope the honor which you have seen fit to confer upon me in asking me to coordinate the activities of two of the agencies that are working in the field of examining. While attempting to coordinate the efforts of these two organizations, it shall be my constant care, under the guidance of the Board of Directors, to seize every opportunity to cooperate with other examining agencies to the limit of our resources in consolidating the gains already made, and in attacking constructively the difficult problems that lie immediately ahead.

BEN D. WOOD,
Columbia University.

Admission Units and Freshman Placement¹

INTRODUCTION BY DEAN HERBERT E. HAWKES

The third paper this morning is by another master in his field, whose experience and whose original work has placed him in a position to speak with authority on the question to which he addresses himself. I take very great pleasure and satisfaction in presenting to this group Dr. Carl C. Brigham of Princeton University, Associate Secretary of the College Entrance Examination Board.

ADDRESS BY PROFESSOR BRIGHAM

WHEN the invitation to address this meeting on the subject of the new admissions plan at Princeton and the prediction of college success was extended, I gladly accepted because it gave an opportunity to write a sequel to Doctor Learned's paper on "Admission to College" read here a year ago. But, instead of adhering to the double-barreled topic assigned, I have tried to discuss the specific Princeton scheme and its uses of predictive devices under the more generalized formula of "Units and Placement."

"Prediction" is a term which implies a high degree of certainty. Its use in educational discussions resulted naturally from the methods of correlation adopted as instruments of study. But, as everyone knows, all correlations which have ever been found between examinations and college standing are too low to give any feeling of certainty. The low correlations obtained from single tests and examinations led people to try to combine the results of several kinds of evidence into a single index by the use of multiple correlation methods. The Princeton "bogie" and the Yale "predicted grade" are typical of such combinations. These indices correlate about .65 or .70 with college standing, and thus provide usable betting systems, but not exact prediction.

¹Presented at the Second Joint Educational Conference, New York City, November 2, 1933.

The Princeton bogie and the Yale predicted grade are general indices. They add in everything that seems significant. Lately, people have been trying to find more specialized indices for use in the assignment of students to certain college courses, French, mathematics, and so on. In this problem of special assignment the single devices are weaker and the methods of investigation break down because of the unreliability of college marks and, further, because of the inadequacy of college courses. I think that everybody who has worked in this field is becoming tired of assuming that the criterion—the college—is infallible and that the sources of evidence derived from the school and the examinations are in error. In many subjects of instruction the methods of teaching and examining in the college are so faulty that a perfect instrument of prediction could not correlate higher than .40 or .50 with the college result. The immediate situation demands, however, not a perfected technique but merely an intelligent betting system. Such a betting system is at hand when an intelligent individual accumulates all the evidence available concerning the student and assigns him to a certain college course. Under the present conditions it is better to go ahead with such *placement* than to await the millennium of a perfect educational scheme and perfect measuring devices. The theory underlying the new scheme of admissions to Princeton assumes that such discretionary placement is possible now.

Any person who has tinkered with admissions requirements to colleges soon senses a difficulty in the notion of a unit. Our notions of the curriculum and our notions of the usability of measurement are changing, but the concept of the unit is fixed. It is a concept exactly defined by the National Conference Committee on Standards of Colleges and Secondary Schools. The definition is substantially as follows: A unit represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work. A four-year secondary school curriculum should be regarded as representing not more than sixteen units of work. This notion of the unit takes the four-year high school course as a basis, and assumes that the length of the school year is from

thirty-six to forty weeks, that a period is from forty to sixty minutes in length, and that the study is pursued for four or five periods a week; but under ordinary circumstances, a satisfactory year's work in any subject cannot be accomplished in less than one hundred and twenty sixty-minute hours or their equivalent.

Within the colleges, tampering with this unit which had erroneously come to be called the "Carnegie Unit" was taboo. Three years ago when I sought a modification of the Princeton admissions requirements I found myself blocked by this taboo. At this meeting last year Doctor Learned explained that the unit had served its original purpose in bringing the schools to a common understanding, but that "with changed conditions and better tools such norms become obsolete."

The essential element in the unit notion is that of time elapsed and the notion of time does not include the notion of individual differences in performance. We may, however, arbitrarily define the individual as an average individual, or as an individual any distance below or above the average. The unit would then be the work accomplished by the given individual in the given amount of time.

In seeking to change our admissions system at Princeton we did not wish to discard any notion of what a normal individual might be expected to accomplish in an adequate curriculum in a good school and we therefore required a base point. This base point was taken as resting on the definitions of requirements and the examinations of the College Entrance Examination Board. Our unit is therefore pegged. It is defined by reference to a secondary curriculum generally approved and by a population comparatively stable from year to year. The "pass" individual—selected for purposes of definition—has about 35 per cent of this population below him and 65 per cent above him.

We thus reach a concept of the minimum value of a unit defined by reference to a definite standard of attainment in a describable curriculum. Our curriculum at Princeton is built on the structure of secondary education, and as our freshman courses rest on the school courses we must maintain a

common link. We attempt to integrate our curriculum with the school curriculum through the Board's definitions of requirements. But this unit notion is in the nature of a minimum requirement. We permit indefinite expansion above this point by awarding credit for honors work and by promising advance placement. Instead of scrapping the unit, as many have urged, we are seeking eventually to replace it with a more usable and workable concept.

The essential characteristic of the system adopted at Princeton is the interlocking of the concepts of placement and units. One can see that we mean by "four units of Latin," placement in a certain Freshman course, by "three units of Latin," placement in another Freshman course, and by "five units of Latin," placement in a Sophomore course. We have offered new categories of honors work which may be counted as more units by the applicant if he wishes, but which actually represent a contract in which we undertake to place the student in an advanced course. Therefore an agreement to place a boy in Sophomore Latin is our immediate concern and not the permission to count this as five units in estimating his program.

We continue to estimate the range and scope of a student's preparation on the "fifteen unit" basis, but he may modify this program by attempting work of honors levels in such a way that the greatest elasticity and freedom of choice are allowed. He may eliminate useless electives usually offered to fill in the chinks and substitute therefor work which actually places him ahead of his class in college.

We refuse to grant honors in single unit or one year subjects and in this way are trying to discourage piecemeal instruction in miscellaneous subject matters and the bald accumulation of credits. In an effort to further the end of a curriculum more closely integrated and better adjusted to the needs of the individual student we have reduced the basic requirement to the equivalent of twelve units and have placed on the schools the responsibility for the rest of the student's program. The basic requirement, of course, must be written in terms of the studies considered necessary to pursue the later college curriculum. Such a defined requirement is neces-

sary for any college which has a definite plan of approach to the later years.

To make clear the mutual interrelation of units and placement let me take as an example the conventional practice with respect to the modern foreign languages in practically all colleges. The modern language training in college is usually classified under the headings of "beginning," "intermediate," and "advanced." The three consecutive courses complete the so-called linguistic courses and precede the courses in literature. The College Board gives examinations at three levels, known as Cp. 2, Cp. 3, and Cp. 4, roughly corresponding to the three college levels. Passing the Cp. 4 examination normally completes a language requirement and places the student in literary and other specialized courses. Colleges have not used the Board examinations rigorously but have developed a flexible interpretation so that students with high marks in the Cp. 2 examination are allowed to skip the intermediate work and enter the advanced linguistic course, while students with high marks in Cp. 3 skip the advanced work and plunge immediately into Sophomore work in literature. The high mark required is around 80. This is a fairly universal practice and has been in operation for many years. It seems to have grown naturally without being seriously questioned or challenged as a radical tendency.

The new Princeton plan of honors awards and advanced placement is nothing more than the complete generalization of this existing scheme throughout all subjects. It happens that there is no Cp. 4 English examination, but if school recommendations and high marks in the comprehensive English examination place a student in a Sophomore English course, then obviously we have the equivalent of a "four unit" English course, regardless of what it is called.

Until recent years at Princeton, and in many colleges now, Freshman English was a composition course, Sophomore English was a survey course, and Junior courses were on special fields. Several years ago the the Sophomore course in English at Princeton was pushed down into Freshman year and some of the specialized Junior courses were moved into Soph-

omore year. The old Freshman course disappeared except for a few traces. I cite these changes as indicating the general trend of an evolutionary process in which the schools improve the character of their training to such an extent that students are able to begin their work in college at progressively higher levels. Recent changes at Princeton have made it possible for us to place over fifty students in Sophomore English directly from their preparatory school classes. The work which these Freshmen are now doing would have been characteristic of Junior courses not many years ago.

Our recent experiences in introducing the new plan of admission have been most illuminating. An essential feature of the plan, if not its most important feature, involves the submission by the applicant of his intended program of study. He indicates broadly and generously the probable trend of his future scholastic interests and the subjects he would like to study in his first year. The admissions office assumes a guidance and placement function, and seeks to work out a satisfactory college program with each applicant.

The results of this placement policy have been most apparent in the advanced modern language registrations which have about doubled. The number of placements beyond the Cp. 4 level is 122 this year as compared with 59 last year. This increase seems to me to be a result of the active participation of the students in the guidance and placement services offered by the admissions office. There has been no change in the regulations governing advanced placement in the modern languages, merely a change in attitude.

The present modern language situation seems to offer the best opportunity for an effective transition from the concept of units to the concept of placement. Many schools are now giving such excellent training in the modern languages that further linguistic training is unnecessary except for special purposes. The schools are, however, a little gun-shy with respect to the Cp. 4 examination. If it is possible eventually to substitute the dynamic concept of placement in a continuing course for the static concept of units, a great advance will be made.

I do not wish to simplify this problem too much by forcing the analogy from modern languages too far. But I do feel that it gives us a practical approach to many troublesome problems. Without indicating a solution let me merely call your attention to the present confused situation in the relation between the teaching of physics in schools and colleges. Freshman courses in physics continuing beyond the preparatory school courses seem to be built on the assumption that little has been learned in school and that much of the work should therefore be repeated. The new student does not realize that his college course is going more deeply into each topic—he merely senses the repetition. This makes for a poor attitude in the college classes and a generally unsatisfactory situation. Perhaps no one can solve the problem immediately, but everyone realizes that the successful solution must involve the integration of school and college physics. The problem must be approached from the point of view of a transfer from school to college.

The examples chosen to indicate what seems to me to be the proper approach to these problems have all been taken from the single subject matters. But it is obvious that we are dealing with much larger aggregates than those represented by defined courses. The work of Crawford and Burnham at Yale in developing prediction formulae illustrates this point clearly. And the individual who must in the end assemble the information and decide on the placement goes way beyond the variables combined in the multiple regression equation and has a far broader base for his judgment. But he does not reach a completely generalized base. The general trend of the technical studies and their practical applications are in the direction of aggregations larger than single courses and smaller than the whole. Such aggregations are loosely represented by English-Latin-history, mathematics and science, and so on. At the moment we seem to have abandoned the general factor theory of education.

But although we look within the school record and the examination record for differential cues, we all seek and use one general index of the school record. Such indices are now

compiled at Princeton and at Yale by somewhat different methods. Professor Crawford can explain the Yale method and I will explain the method used at Princeton. The Yale method is better. At Princeton we keep school ledgers showing beside each individual his rank in his school class and his subsequent college grade. The school ranks are converted to a common scale and the average represents the selection from that school. Knowing the average attained grade of the entire class, of each school group, and correcting for selection, one may obtain a "converted school grade" which is a serviceable general index. From the position of the new applicant in his school class this index assigns a probable grade on the basis of the performance of all boys who have entered Princeton from that school in the six years preceding. Our betting system correlates about .65 with Freshman standing. The Yale betting system correlates about .70 with Freshman standing.

Both betting systems work well without reference to the actual grades in the June examinations of the College Board, but both are in fact based on a system of secondary education designed to meet the definitions of requirements of the College Board. Neither system would work in a vacuum, and it is fallacious to argue that because one's multiple correlations are not increased much by adding in the final marks one therefore does not need the marks. The essential point is that these apparently independent results are obtained within a framework defined by the Board, and that they are largely dependent on that framework.

Our betting system at Princeton is set up in April, about six months before admission, and provides the basis for the placement of students in the new work which is open to them in college. I do not wish to leave the impression that we regard all work as necessarily a continuation of studies previously pursued. There is a great deal of advanced placement in subjects not offered in school. Those who will probably be in the upper third of the Freshman class are permitted one Sophomore elective, those in the upper twelfth, two Sophomore electives, these electives being in new courses

over and above the advanced placement accompanying the honors award.

The placement and guidance service which is a part of the admissions office now has 136 Freshmen enrolled in one subject ahead of their class, 57 Freshmen enrolled in two subjects, 15 enrolled in three subjects, four enrolled in four subjects, and one enrolled in five subjects. Over a third of the class is one year ahead in one or more subjects. It is impossible to say where the continued extension of this policy will lead, but our faculty has adopted the plan outlined with all of its implications. The one fixed element in the situation seems to be our upper-class plan of study culminating in the final comprehensive examination. This seems to me to represent a concept of work at the university level. There seems to be no correspondingly fixed concept of Freshman and Sophomore years. Under the plan now in operation these years are shared with the schools and boys may be pushed ahead into upper-class work as soon as they are ready for it. The student who enters the upper-class program one year after admission has before him the opportunity of work at graduate levels with the master's degree as a possible goal. The notion of quality of performance has been substituted for the notion of time and units throughout. At least we seem to have left behind the notion of "one hundred and twenty sixty-minute hours, or their equivalent."

Although I was invited to address this group on the subject of the new Princeton plan of admission, I cannot resist the temptation to go beyond this topic and say something about examinations. The attitude towards examinations at Princeton and many other of the examining colleges is not that of the test technician purely and simply. It is true that we need smaller errors of measurement than we have at the present time, but we cannot sacrifice other aspects of examinations to the purely placement function.

My point may best be illustrated by reference to the general problem of examining in English. The verbal section of the Scholastic Aptitude Test is probably the most reliable measure yet developed and it has some correlation with Eng-

lish grades in college, yet it is not English. Similarly objective tests in English which have a low error of reading must necessarily restrict themselves to measures of vocabulary; proof reading for errors in grammar, punctuation, and spelling; information tests on literature; and similar fragmentary devices. But this is not English.

The Board's definition of the requirement in comprehensive English seems to be universally approved. Even some of the progressives who are in revolt against all measurement object neither to the requirement nor to the examination. It is the general opinion that this requirement has promoted effective teaching and has held a stimulating goal before the candidate. The difficulties connected with the use of this examination arise from the error of measurement. It is hard to read.

This year the Board tried an entirely new procedure in the reading of the Comprehensive English papers. The examination included five questions and the candidates were instructed to write the answers to three of the questions in one book and two of the questions in another book. The two answer books for each candidate were numbered in duplicate and sent to different groups of readers for appraisal. The first rating of each half-script was then obscured and returned to a different reader for an independent appraisal. The readers were instructed not to use numbers but to judge the performance on each question on an eight-point quality scale, for which mimeographed standards were supplied. Numbers were subsequently attached to the literal quality scale on the basis of frequency of use of the eight qualities rated. The four independent readings which were thus secured for each candidate were then combined and final grades were assigned by a grading committee which had before it the reference of these marks to the generalized distribution of Board marks in all subjects in other years.

Before the reports were sent to the colleges a Hollerith card was punched for each of the 6,900 books read in this manner and we now have available for the first time an enormous body of information concerning this type of subjective appraisal of a candidate's written work. We have not only

the 45 intercorrelations of all of the judgments expressed in the ten grades but also six or seven hundred correlations of individual readers against the general group of readers. This study is not yet completed but it indicates the possibility of obtaining a very marked reduction in the size of the error of measurement. We know that the judgments of the independent readers on single questions will correlate as high as .70 or .80. Linearity studies of correlation plots indicate the manner in which the rating scale may be modified in order to obtain better relationships between judgments. We suspect that the examination itself may be modified in such a way that a higher intercorrelation of questions will generate a final mark more descriptive of the candidate.

At this meeting last year Doctor Learned expressed the opinion that the Board had reduced the reading of its papers as nearly as possible to a flawless formula and that the defects seemed to be inherent in the discursive written examination. The study which I have just described suggests to me the enormous possibilities of developing the art of reading the written examination beyond that ever before considered possible.

Several years ago Doctor Learned gave a very excellent account of the European educational machinery and drew striking comparisons between their systems and ours. One of the contrasts most consistently urged was that between the European and the American attitude towards examinations. Speaking of the importance of the examination in England he said:

"It is clear that English teachers consider a final general examination as an integral part of their educational system. What in this country is variously regarded, often involuntarily, as a necessary, or an unnecessary, evil, becomes with them the main pillar of the educational process. It is much more than an inducement to hard thinking, important as that is. A clear scholastic goal ahead is believed to encourage as does nothing else the conviction of responsibility and moral as well as the mental training of intellectual youth. Term tests and marks are universal there, as here, but there they are used only for estimating and recording progress and for assigning prizes and class standing. To substitute them on the

installment plan for the requirement that a pupil actually set up and grapple with an exacting intellectual task that justifies his claims is like proving fitness to run a two-mile race by running half a mile each year for four years and adding up the results."

The attitude of our examining colleges is essentially the English attitude. The most representative secondary schools here are in substantial agreement. The American contributions to the art of examining have been in technical improvements and have resulted from our natural inventiveness. The successful solution of the problem demands the reconciliation of the two points of view.

I have no desire here to minimize or attempt to conceal the very obvious errors in our present examination system. But I do not feel that these difficulties are insuperable. What is needed, to my mind, is a carefully balanced and completely integrated system of examinations including comprehensive goal examinations as the end with the various stages of development towards this goal measured and described as accurately as possible. With these two aspects of examinations in mind I see a reconciliation between the points of view of the College Entrance Examination Board and the Educational Records Bureau.

CARL C. BRIGHAM,
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The Technique of Constructing Tests¹

INTRODUCTION BY DR. C. R. MANN

The topic of the afternoon is Testing Techniques. This is a matter of growing significance to the schools, to education in general. I have watched the growth of this testing movement for a great many years. I remember very well when I was making a study of engineering schools some years ago, the testing technique was in its infancy. I had the temerity to propose to the engineering committee that had charge of that study that we get Professor Thorndike, the pioneer in this movement, to devise and try out some of these tests in engineering schools as an aid to determining the quality of the engineering instruction. I was almost discharged as special investigator for the committee. It took me about five months to persuade the committee to allow this experiment to be made.

A little later, in the War Department, during the War, the Chief of Engineers had sixty young West Point graduates thrust upon him. They had graduated after two years of work at West Point and been assigned to the Engineer Corps. He felt that they were not competent to be engineer officers without some additional instruction. So he asked me to help him organize a small school of engineering at the engineer camp at Fort Humphreys. After some debate with him, I succeeded in persuading him to permit a testing expert to come down and test those sixty young graduates in various ways, as a basis for developing the kind of instruction that might be most helpful to them. We secured a young testing expert from Columbia. He came to Fort Humphreys and spent a couple of weeks making various tests on this group of sixty young West Point graduates. Finally he turned in a report grouping them in various ways according to their IQ's, and various other things. I took the report over to the Chief of Engineers and told him what it meant. He glanced it over and

¹Paper read at the Second Joint Conference on College Entrance and Educational Guidance Problems, New York, November 3, 1933.

said, "Well, it gets me, how these highbrows take two weeks to find out what any damned fool knows in the first place." That was the state of the public's respect for the testing program in 1918.

Respect for the testing program has enormously increased since those days. In proof of that fact, I refer to Commissioner Zook's paper yesterday morning before this conference, in which he made it clear that the North Central Association is engaged in a fundamental revision of the basis of accrediting. One of the factors that has been influential in making the authorities of that Association think that a revision of the accrediting process is desirable is the work that was done in Indiana, Iowa, and other states with this testing program in the public schools.

The results showed that a lot of the youngsters in unaccredited high schools throughout the state didn't have any more sense than to do better or as well on the examinations as did the students in the accredited schools. That fact, together with the fact that the students in United States history classes, for example, taught by a young teacher who had never had any specific training in teaching United States history, often did as well in the tests as did students who were under teachers who had had a lot of professional technical training in the specific subject of teaching United States history, rather disturbed the authorities. The result has been that the accrediting process is in process of revision. That shows, at least, that the testing program has made sufficient progress to be taken seriously. The results of these tests are being studied and made use of. They are invading the sacred ranks of academic accrediting and winning public recognition of their significance.

During this process of winning public recognition, the testers themselves have not been idle. They have been growing and changing their conception of the way in which tests may be used and of the value that may be derived from them. The earlier efforts, as I remember them, were directed mainly to the construction of tests that would replace the ordinary examination in determining the flunking mark for students in par-

ticular subjects. It was argued that those tests were much more impersonal, and thus did away with the subjective estimates of teachers. They were devised to give a more objective means of determining academic proficiency in particular courses. Tests could then be used as a basis of promotion, so that a student could be advanced more rapidly if he were showing greater proficiency. Achievement might then supplant credits as a basis for promotion. I remember that when our Cooperative Test Service was established, one of the main arguments that brought support for the enterprise was the hope that this experiment would help us learn how to substitute achievement for credits as a basis for promotion.

Now the testers tell me they are finding that the tests are even more valuable as a basis of guidance. They may yet be used to determine which studies are educationally profitable for a student and which are not. This opens up a vast new field of educational experiment. So the testers themselves are growing and the movement is growing. We mustn't expect too much of it all at once because it is in a state of flux. It is certainly contributing very largely to the transformation that is going on in education at the present time.

Among the testers Dr. Lindquist, who is going to talk to us today, is one of the leaders in the movement for the improvement of these tests. He is an expert at testing tests and finding out what they mean for particular purposes. One challenge was thrown up to Dr. Lindquist by Commissioner Zook yesterday when he said that he would be glad if a testing program could be arranged that would help the accrediting agencies to determine the educational efficiency of an institution. If we could have a testing program when a student enters an institution, and then keep appropriate records through two or three years, and then have a second set of tests that would indicate how much that student had advanced, we would have one valuable new type of information for the accrediting agencies that would be perhaps more reasonable than are the number of books in the library and the other mechanical devices that have been used. Thus one of the challenges that the testers have before them is the challenge of showing how

those tests can be used as a basis for measuring educational efficiency of an institution for the purposes of accrediting.

I would like to present one other challenge to the testers. It is one that is coming to them within the next few months, because the testing programs that have been developed during the past fifteen years were developed from the point of view that we all had during the war and immediately thereafter, when there were more jobs than men. Then we developed and used the tests to reveal special proficiencies of particular people in order to place them in particular jobs. Now the situation is totally reversed. We have more men than jobs. Unemployment is the critical issue of the present time socially and educationally. Therefore the tests must now be used not as a means of fitting men to jobs, but as a means of discovering what the particular capacities of particular individuals are and how those individuals may best be developed to become social assets instead of liabilities. This is a new challenge to the testing profession. I am sure that the testing profession will meet the challenge effectively through their experimentation with these tests.

We are very fortunate in having with us today Dr. Lindquist who has charge of the Iowa State testing program which was one of the overt acts that made the North Central Association realize that revision of the accrediting system is necessary. Dr. Lindquist is working closely with the Cooperative Test Service on this subject. I take great pleasure in introducing Dr. Lindquist.

ADDRESS BY DR. E. F. LINDQUIST

THE specific considerations which determine the form and the content of modern achievement examinations, particularly of the type now being prepared by the Cooperative Test Service and used in your own Educational Records Bureau program, are, in the main, technical considerations. These considerations have arisen out of the new uses to which the examination is being put, particularly in educational guidance, and out of the consequent necessity for general applicability of the same examination to a wide variety and range of

local teaching situations and of levels of achievement. They have resulted in a type of test which differs significantly from the traditional examination, not only in external form, but even more noticeably in the specific functions that it is intended to serve, and in the nature of the content upon which it is based.

The full significance of these technical considerations and of the limitations in function and content which they have imposed on the general achievement test has not as yet secured general recognition. Test users and teachers in general are still attempting to evaluate the modern achievement examination in the light of traditional standards which are no longer applicable (if, indeed, they ever were valid), and are still retaining many erroneous ideas which originated with the traditional examination. The objective achievement examination is therefore under constant criticism for its so-called "failure" to perform certain of the vaguely defined functions formerly claimed for the traditional examination. Objective testing techniques in general, and the standardized test in particular, are still regarded with various degrees of suspicion and distrust by perhaps the great majority of their potential users. There is some evidence, indeed, that in the last few years there has been a period of decided reaction against the new-type test, during which many of the earlier prejudices have been revived and strengthened.

This situation is particularly unfortunate in relation to the major interests that are represented at this conference. The greatest hope for an educational guidance program that will begin to function effectively early in the high school course now appears to lie in the systematic use of achievement and aptitude test results over a period of several years preceding entrance to college. It is to make possible educational guidance of this type that organizations such as the Cooperative Test Service and the Educational Records Bureau have come into existence. These organizations, however, can never succeed to the extent which they deserve, nor can their possibilities for educational guidance be widely realized, until the *instruments* which they employ (i.e., the examinations them-

selves) are fully understood, and until the present attitude of distrust and suspicion has been dispelled. This lack of confidence in the objective achievement examination is, I believe, one of the major obstacles to progress along the lines indicated by this conference. There are few, if any, teachers or school administrators who do not recognize that there is a very definite *need* for more intelligent and more effective procedures in educational and vocational guidance; nor are there many who are not in full sympathy with the avowed *purposes* of such organizations as the Educational Records Bureau. There are very many, however, who, because of their lack of confidence in the instruments employed, are not availing themselves of the services offered. There is at present, then, a very crucial need for a clearer understanding, on the part of all concerned, of the technical limitations of a test of the general achievement type, and for more adequate appreciation of the precise functions which, in view of these limitations, it may reasonably be expected to perform. Once these functions and limitations are clearly understood, much of the criticism now directed against the general achievement test will disappear, and with it will disappear, I believe, much of the resistance now offered to the regional testing program and to current proposals for better educational guidance.

It is my purpose in this discussion to draw your attention to certain of these more technical considerations in general achievement testing, and to attempt to show their significance in relation to the form, content, and functions of the general achievement test. In particular, I shall try to demonstrate how dangerously fallacious and misleading are some of the ideas about achievement testing which are now widely prevalent and generally accepted.

I shall begin by simply reviewing, without any comment, a few of these prevalent ideas. I should like to request that, as I review these ideas, each of you ask yourself specifically if you have hitherto considered any of them as in any sense erroneous or misconceived. (My intention, you see, is to try to provoke your interest to the point at which you will listen more pa-

tiently to the very dry technical discussion which I am going to impose upon you!)

Most of these misconceptions arise out of the general idea that the criteria used in the evaluation of *curriculum* content are in themselves sufficient criteria for the evaluation of test content—in other words, that the validity of the content of a general achievement test may be judged by the same standards that are used in the evaluation of the course of study. As a result of this basic misconception, it is quite generally believed that what *should* be learned, as judged by curricular objectives, is the only important consideration in the selection of test content; that the content of a general achievement test should constitute a strictly *representative* sample or cross-section of accepted curriculum content, and that, as such, it may be considered as setting a sort of “standard” to which teachers may and should “point” their instruction.

Two additional misconceptions may well be considered together with those just given. One of these is the idea that a general achievement test can and should be effective in the diagnosis of individual pupil difficulties. The other is the particularly persistent idea that the items in a general achievement test should consist predominantly, if not exclusively, of so-called “reasoning” or “thought” questions, and that tests which are exclusively or largely “informational” in character cannot provide valid measures of achievement.

Perhaps I had better admit, before continuing, that I may have been unnecessarily provocative in labeling each of these ideas flatly as a misconception. Most of them are erroneous in part only, or in certain of their presumed implications, and are, within certain limits, quite sound and extremely important. There are very definite and restricted limits, however, beyond which they do not apply. It is the definition of these limits, which are so seriously ignored in current criticisms of the general achievement test, that is the specific purpose of the remaining discussion.

School examinations and the measures derived from them are used to serve a wide variety of purposes. In general, however, they have only two immediate objectives. The first

of these is to rank the students tested in the order of their total achievement in a given field of achievement. The second is to discover and to identify within the given field the specific weaknesses, errors and deficiencies in the achievement of the individual pupil. Nearly all of the ultimate uses of the school examination, as, e.g., in the improvement of instruction, in sectioning, in promotion, or in educational guidance, depend directly upon the effectiveness with which one or both of these immediate objectives is performed.

It would be highly desirable, of course, if both of these purposes could be effectively served by the same examination. Any such combination of functions in a single test, however, is, for reasons which I shall later present, definitely impracticable if not impossible. In order to make a test highly efficient in the measurement of general achievement, its diagnostic values must be sacrificed. A test that is to be truly diagnostic, on the other hand, would have to be made so long and time-consuming that its use with other equally long tests in a comprehensive testing program would be out of the question. Most general achievement tests, therefore, such as those used in the Educational Records Bureau program, are admittedly and of necessity intended only to provide measures of general achievement. What diagnostic values they may have are in most cases only incidental and insignificant.

In order better to understand the necessity for this and other limitations in function and content, let us consider briefly the significant characteristics and essential features of a general achievement test. Some of these characteristics will perhaps appear so obvious to you that they will seem hardly in need of review, but their implications, I am sure, are not so generally appreciated.

A test of general achievement is, by definition, one which is designed to express, in terms of a single score, a pupil's relative achievement in a given field of subject matter. In consideration of the wide or indeterminate scope of the fields of subject matter for which such tests are usually designed, none of them obviously can test directly and independently for the acquisition of each of the specific ideas, skills, abilities, and

items of information which it might be desirable for the pupil to acquire. The items constituting any general achievement test must be considered as representing only a very *restricted sampling* of all of the items that might be constructed on the basis of the subject matter involved. Few schools can or will use, in a comprehensive program, a general achievement test in a single subject that requires more than two hours for its administration. It is not practicable, therefore, to attempt to include, even in a test of the objective type, more than one or two hundred out of the many thousands of acceptable items that could be prepared.

With these very severe restrictions upon the scope of the sampling permitted, it is highly important that each individual test item contribute as much as possible to the validity of the whole test. With so few items permissible, there must be no "duds" or non-functioning items. The validity of the whole test depends, by definition, upon the degree to which the scores obtained from it rank the pupils in the true order of their total achievement. The function of any individual item is, of course, the same as the function of the whole test. The validity of any single item must depend, then, upon the effectiveness with which that item *of itself* discriminates between pupils who are inferior and superior in total achievement.

It follows immediately that no item which is answered correctly by *all* pupils in a given group can be of any functional value in a general achievement test intended for that group, nor can any item which is answered correctly by *none* of the pupils tested. Any item to which all of the pupils respond alike, whether correctly or incorrectly, obviously cannot serve to *discriminate* between those pupils in any way, and hence has no place in a general achievement test whose sole purpose is to discriminate.

The first technical requirement, then, for each and every item in a general achievement test intended for a given group, is that it must be answered correctly by *some* but not by *all* of the pupils in that group. This requirement alone immediately establishes a very fundamental difference in the content of diagnostic and of general achievement tests. A diagnostic test

is one intended to discover *specific* rather than general deficiencies. It is a test on which a single total or composite score is of little or no significance, but on which part scores, or numbers of correct responses to individual items, are the measures sought. In such a test it may be very desirable to know that there are certain things which have been learned by all or by none of the pupils tested. Such information may obviously be of value, as, e.g., in taking an inventory of the initial achievements of a group of pupils at the beginning of a course of instruction. For the purpose of *ranking* pupils in order of their achievement, however, such items would be of no value. Their presence in a general achievement test would, in fact, positively lower its efficiency by taking the place of other items that do have discriminating power.

The significance of the difference between diagnostic and general achievement tests becomes still more apparent upon consideration of a second technical requirement for general achievement test items. This second requirement, almost as obvious as the first, is that the items in a general achievement test must be *distributed* along the difficulty scale, with specific reference to the group for which the test is intended. A general achievement test must discriminate between pupils at all levels of achievement at which it finds them. It must contain some very easy items, to discriminate between pupils who are low in ability and achievement, it must contain some items of intermediate difficulty to discriminate between pupils of average ability, and it must contain some items high in difficulty to discriminate between those pupils who are "very superior" and those who are just "above average" in achievement. Some items will be missed by 10 per cent, some by 20 per cent, and some by 90 per cent of the pupils, with the whole range of difficulty represented.

Now the average difficulty and the range in difficulty of the items in a general achievement test, for the pupils in a given group, are clearly a function of the level and range of *achievement* which actually characterize that group. Whether an item is easy or difficult for a certain group depends upon how much that group has learned. An item that is easy for one group

may be hard for another. The level of difficulty and the range of difficulty of the items in a general achievement test must, therefore, be specifically adjusted to the particular group to which the test is to be administered. How well it will discriminate within that group depends upon how well that adjustment has been made.

Let us see more specifically what this means with reference, e.g., to the tests used in the Educational Records Bureau program. The group for which these tests are intended includes pupils from a wide variety of types of schools, and with great variability in the levels of achievement from school to school. We all have some notion of how very wide is the range in actual achievement in this large and heterogeneous group of pupils. It includes pupils all the way from those you would characterize as "hopelessly dumb," as well as very poorly taught, to those in the most efficient schools and of genius or near genius calibre. A single general achievement test, however, must if possible discriminate between pupils at all of these widely varying levels of achievement. It must contain a due proportion of items which even the poorest of these students can answer, as well as a certain number of items to which only a few of the best of these students can respond correctly. Unless the test has these characteristics, it will not rank in their true order the pupils at the lower end of the scale of achievement, nor will it indicate the true status, in relation to the whole group, of those pupils who are able and well instructed.

Ovious as this technical requirement may seem, many of its logically unavoidable implications have been persistently ignored. This requirement means, first of all, that the final consideration in the selection of test items is not what *should* be learned, but what actually *has* been learned in the group to be tested. The items in a general achievement test must be adjusted in difficulty to the group to be tested, but the "difficulty" of any item is, after all, simply the proportion of the pupils in that group who have learned how to, or who can, make the correct response. The requirement that the items in a general achievement test must be distributed along the

difficulty scale may therefore be restated as follows: If we think of the entire group of students as separated into a number of levels of achievement, then for each of these levels the test must contain a due proportion of items calling for information that the pupils at that level *have* learned, or for ideas and generalizations that they do understand, or for judgments, applications or reasoning of which they *are* capable. The lowest level of achievement in a group as large and heterogeneous as that for which the Educational Records Bureau tests are intended is a low level indeed, but the test must contain some items adapted to that level. In the last analysis, then, what may legitimately be included in a general achievement test depends, not only upon what *ought* to be learned, but much more significantly, upon what actually has been achieved, and upon the way in which those achievements are distributed.

There is, as all of you know, a very real and very wide gap between our hopes and our achievements in teaching. What we aim to accomplish, as indicated by our neatly phrased statements of *objectives*, and what we actually do accomplish, are, to say the least, not quite identical. Consider, e.g., an avowed aim of high school instruction in the social studies—"to develop a reasoned understanding of, and ability to cope with, current social, economic, and civic problems." There is little wonder that the content of general achievement tests does not seem to "square" with objectives of this type. There is, indeed, a very noticeable difference between what we should like to have our pupils learn, and that for which they are tested in a general achievement test—particularly if that test is well constructed and properly adjusted in difficulty.

During the past five years I have helped to prepare most of the examinations in the social studies distributed by the Cooperative Test Service, including some of those recently used in the Educational Records Bureau program. In that capacity, I have been the recipient of a great many criticisms of these tests. The most frequently occurring of these criticisms is that the tests have been too factual or informational in character—that they have been too much limited to the

testing of pure information or of a low level of understanding. One answer to that criticism is that we have attempted, as best we can, to adjust these tests to the type and level of understanding and of achievement which actually characterizes the pupils to whom the tests are to be given. If only a negligible proportion of high school pupils exceed a given level of understanding, then there can be no point in including in the test a large proportion of items that go beyond that level. It should be obvious, it seems to me, that an achievement test cannot measure something which does not exist in the group to be tested.

As a matter of fact we have, in our attempts to satisfy the critics, frequently been in danger of erring in the other direction. In many instances we have included in our experimental editions items which, because they tested for understanding of a relatively high order, appeared to be particularly acceptable from the critic's point of view. Upon actual trial, however, many of these items proved to be too difficult for inclusion in the final test form. Worse than that, some of them were answered correctly more often by the very inferior pupils, who guessed blindly, than by the best pupils, who at least tried to reason! Items of this kind are worse than useless in a general achievement test, since their effect is to penalize the superior students.

How an overly difficult item may thus not only fail to contribute to the purpose of a general achievement test, but may actually interfere with that purpose by penalizing the superior student, is worth at least a brief consideration at this point. A third technical requirement of an item in a general achievement test, in addition to the two I have already described, is that the pupils who respond correctly to that item must, on the average, be superior in general or total achievement to those who respond incorrectly to the item. More specifically, if, e.g., 200 out of 1,000 students succeed on a given item, then these 200 students must, on the average, be superior in achievement in the whole field tested to the 800 who fail on the item. This is only equivalent to saying again that each item in a general achievement test must of *itself* discriminate between

pupils who are inferior and superior in general achievement. An item may, however, discriminate in the wrong direction—it may be answered correctly more often by the poorer than by the better students—it may raise the total score of the poor students and lower the total score on the test of those who are superior.

Let me illustrate how this may happen in the case of a multiple choice item intended, let us say, to test for the pupil's ability to interpret a given historical event. The item might consist of a direct question (similar to that which might be asked in an essay examination) followed by, say, four possible interpretations. The task for the pupil would be to select the one acceptable interpretation from the four given. If such an item is to test for a relatively high level of understanding, then it is essential that the three wrong responses be not too obviously incorrect. Each alternate response must be highly plausible, i.e., it must have the appearance of being logically consistent with many of the facts known to the student. There is considerable danger, however, that in this attempt to test for more than only a superficial understanding, the alternate responses may be made so plausible that they will defeat their own purpose. There is a danger that they will appeal more strongly to the superior student, who has the information that makes them appear plausible, than they will to the uninformed student, who may not know even enough to recognize their plausibility. The uninformed student, not having the information which makes the wrong response plausible, may avoid it and select the correct response—either by guessing blindly or because he has memorized something which he doesn't understand—while the better students may be almost invariably misled by their superior but still insufficient information or understanding. The result will be that the poorer students will, on the average, score higher on such items than those who are superior. Pope may very well have been thinking of objective test items when he said, "A little knowledge is a dangerous thing."

In a general achievement test intended for a given group, then, an item testing for a high level of understanding will

function effectively only if there is in that group a significant proportion of students with sufficient understanding to reject the plausible wrong responses. If in the group tested there is not a reasonable number of such students, the item will not only fail to discriminate as it should, but may actually discriminate in the wrong direction. Such items can ordinarily be detected only upon actual trial with a representative group of pupils and upon statistical analysis of the results. In other words, their detection is an empirical, rather than a logical, process. If general achievement tests are to have their maximum efficiency, it is extremely important that items of this type be rejected through preliminary or experimental tryout of all test materials.

If this fact were more generally appreciated, there would perhaps be fewer demands for more items of the so-called "thought" or "pure reasoning" variety in our general achievement tests. We hear a great deal of talk about the importance of teaching pupils to think, and about the dangers of "informational" teaching, and we are reminded again and again that our tests are vicious because they will encourage teachers to teach facts. These criticisms are certainly well intended, and there is much in them that deserves serious consideration. We must not go so far, however, as to forget that no student ever will or can think until he has precise and sound information to think with, and that all too many of our pupils are inherently incapable of ever doing the brand of thinking that we talk about.

There can be no question that the quality of reasoning and the level of understanding actually attained by high school pupils are in general much lower than might be wished. Whether we like it or not, the type of achievement now attained by most high school pupils is definitely on a low level of understanding and is largely informational in character. It will therefore continue to be necessary, in the construction of general achievement tests which are to discriminate between pupils at the level at which it finds them, to limit a large proportion of the items to well-selected *information* and to a low level of understanding. This is not a situation for which the

test constructor should be blamed—it is a matter of technical necessity rather than of choice. The blame, if any blame is involved, should rest with the pupils tested because they have not learned more, or with their teachers, because they have not taught better!

The content of a general achievement test, again, must be selected with specific reference to what has been achieved in the particular group for which the test is intended. Each of its items must be answered correctly by some but not by all of the pupils tested, and the number of items at each level of difficulty must be somewhat proportional to the number of pupils who have reached a corresponding level of achievement. There are still further implications of these technical requirements that we have thus far only indirectly considered.

In relation to the ideas which I listed earlier in this discussion, these requirements mean that curriculum validity is not synonymous with test validity, that the content of even the best course of study is in itself not a sufficient guide to the selection of test items, and that the content of a general achievement test may not be a strictly representative cross-section of accepted curriculum content. By this, however, I certainly do not mean to say that the accepted objectives of instruction or the content of established courses of study may be disregarded in test construction. It is of course extremely important that nothing be included in a general achievement test which does not clearly “belong” to the field tested or which is not consistent with the accepted objectives of instruction in that field. Curriculum objectives and courses of study do set the broad limits of the content from which achievement test items are selected, and these broad limits must be very carefully observed. Within these broad limits, however, there are many elements of content which, for the reasons that I have given, may not be used in achievement test construction. It is only from within the relatively very narrow limits of what has been learned that test item content may be selected. The content of an achievement test, therefore, cannot be a cross-section of the whole content of the course of study—it can only be a cross-section of those elements in the course of

study which some but not all of the pupils have actually acquired.

Achievement test construction is therefore not a purely logical process, guided only by considerations of curriculum objectives. It is primarily an empirical process, in which considerations of objectives may determine what may be tried out in experimental editions of the test, but in which the objective evidence secured from the tryout must be allowed to determine finally which items may be retained in the final form.

There is just one more implication of these technical requirements which I should like to consider briefly before concluding. There is a very definite tendency, among teachers and test users in general, to feel that the content of a general achievement test is or should be a type of curriculum "standard" to which their teaching should be made to conform. In other words, they tend to consider the test as a sort of abbreviated course of study, or as a source of specific suggestions for curriculum content, and they therefore often attempt to "point" their teaching toward that content. These dangerous tendencies and misconceptions again arise out of the general failure to recognize the specific functions and the content limitations of a general achievement test. The content of a general achievement test does not describe what should be taught—it describes only that part of what should be achieved which actually has been achieved. It is, in a sense, a picture of the *present* status, not of the desired status of achievement. The general achievement test is purely a measuring instrument, not a teaching instrument. It no more represents the goal of teaching than the penny scale on the street corner represents the goal of physical weight. Ideally, the general achievement test should no more *influence* teaching content and procedures than the penny scale influences our ideals of physical perfection.

Unfortunately, however, what the attitude toward the general achievement test should be and what the general attitude now is differ very considerably. Whether we like it or not, general achievement tests do influence teaching, and will continue to do so until test users become fully enlightened con-

cerning the nature and function of such tests. For the present, therefore, we are often forced to make compromises with technical requirements in test construction. In our high school achievement testing program in Iowa, e.g., we deliberately make use of our examinations to effect certain changes in teaching emphasis, and we do so, perhaps, at some sacrifice in the functional effectiveness of our tests for measurement purposes. Our philosophy is that since the tests are in any event bound to influence teaching, we might as well insure that their influence is in the right direction. That practice is admittedly inconsistent with what I have been saying, but the compromise seems to be demanded by the irrationality of the situation in which we are working—and by that I do not mean to admit that popular educational philosophies in Iowa are any less rational than they are elsewhere!

In conclusion, let me summarize briefly some of the more significant of the points that I have made.

There is at present a very general attitude of distrust and suspicion toward the objective general achievement test. This attitude is a major obstacle to the growth of cooperative regional testing programs, and to the development of their educational guidance and other possibilities. This lack of confidence in the general achievement test is due to a general failure to recognize and understand the specific functions and the technical limitations upon the content of a general achievement test. The immediate purpose of a general achievement test is to rank pupils in the order of their total achievement. To do this most effectively and within practicable time limits it must be specifically adjusted in difficulty to the particular group for which it is intended. This means that its content must be restricted, within the broad limits set by curriculum objectives, to the actual achievements of the pupils tested. It follows from this that the concept of validity of content from the point of view of achievement testing is much more restricted, specific, and technical in nature than the concept of validity from the viewpoint of the curriculum builder. Certain specific implications of these facts are:

That the content of a general achievement test cannot rep-

resent a cross-section of the entire course of study; that the process of test construction is predominantly empirical and technical in nature;

That general achievement tests for general high school use *must* of necessity be largely informational in character and limited to a low level of understanding and of reasoning;

That a general achievement test cannot, within practicable time limits, also serve effectively in the diagnosis of individual deficiencies;

And, finally, and perhaps most important, that a general achievement test is purely a *measuring* and not a teaching instrument, and that ideally it should be neither intended nor allowed to influence teaching practices.

E. F. LINDQUIST,
University of Iowa.

Judging and Recording Pupil Characteristics

INTRODUCTION BY MR. FREDERICK J. V. HANCOX

I should like to express my very deep appreciation of the honor conferred upon the organization which I represent and upon myself by the invitation which the Educational Records Bureau and the organizations that are sponsoring this conference have given me to take some small part in it. My share in the activities of the conference makes me think of one of the characters in "Of Thee I Sing" and "Let 'Em Eat Cake"—the much-esteemed Vice-President. In view of the subject of Dr. Smith's address, however, my inconspicuous part in the proceedings seems to me very satisfactory. I should hesitate a long time before consenting to deliver an address on the subject of "Character Traits and Their Rating." It is difficult enough, heaven knows, to discover the truth about one's own character without attempting the enormous job of estimating someone else's. Somehow or other this task of personality rating must, however, be undertaken and carried on. The need for some such attempt is obvious at the time of a pupil's transfer from one institution to another. It is obvious also that work of this sort might be made tremendously valuable to the pupil himself in the field of self-appraisal and self-improvement.

I know no man who is better qualified to deal with so intricate and delicate a subject than Dr. Smith. The three years during which the Secondary Education Board was at work on its Study of the Secondary Curriculum gave me almost unlimited opportunity to see Dr. Smith in action. The effect of that observation is that I have complete confidence in Dr. Smith's ability to illuminate the subject under discussion with the light of reason and sympathy.

ADDRESS BY DR. EUGENE R. SMITH

American education has failed to fulfill its promise to civilization. Over and over again one or another of its leaders has stated in no uncertain terms that all that was needed to make all right with the world was support of

universal education. It was assumed that a man or woman of sufficient schooling was, because of that, successful as a person and as a citizen.

Very little was said as to what kind of education was to be supported. There were few to suggest the difference between mere schooling and real education. People were slow to point out the fact that an educated criminal might succeed as a criminal rather than as a law-abiding citizen.

The American people have rallied to the support of education. They have spent sums of money that would have been unthought of a short time ago. The United States has at the present time approximately a million teachers working with over twenty-seven million children. It is true that we are faced just now with an emergency in the financial support of our schools, but I have enough faith in the American people's belief in education to think that even in this difficult period they will see that educational institutions receive the support they need.

The public has done its part, but education has not proved its case. True, these millions are not yet managing the country, but their predecessors in our schools are, and they have committed crimes and made mistakes to an extent that it is difficult to excuse. The reason, I believe, is that teachers and schools have not realized fully enough their responsibility for character and for citizenship. Traditionally, and, I think, on that account quite naturally, education has been concerned primarily with scholarship, with the academic view of the duty of the school.

Schools originally had a definitely academic purpose. It was their duty to teach certain subjects that were necessary for certain groups of people. Unfortunately they have held to that important but restricted aim without stopping to analyze the changed and still changing demands on the school brought about by present conditions of life.

I should dislike to be thought to be too greatly minimizing the value of scholarship or of academic work. I should be sorry to be in the position of a professor in one of our colleges who, in speaking one night, outlined the aims of education and dared to put them in percentage form. He talked

about the formation of character, the development of citizenship and the cultivation of certain powers, attitudes and habits, and ended by leaving but ten per cent for knowledge. The next morning as he walked across the campus and passed a group of young men who were talking together, he heard one of them say to the others, "There goes Ten per cent Knowledge."

As I said, I should dislike to be in the position of seeming to minimize too greatly that very important aim of the schools. The fact remains that we have over-emphasized knowledge *per se*. We have over-emphasized stated bodies of facts and information. We have given too little emphasis to producing the right kind of people, and we have even under-emphasized those habits and skills that underlie all effective scholarship.

I have thought sometimes that our educational procedure might be likened to the use of a cannon. We have too often loaded the cannon and paid no attention to the direction in which it was pointed. We all know that the effect of the explosion of a cannon that happens to be pointed in the wrong direction may produce quite disastrous results. Yet we have turned out a great many young people who had been given school training without sufficient assurance that they would use that training in a constructive way. Consequently, there has been no direction, no certainty that the things provided were going to come back to society as assets rather than liabilities.

I am not sure that I could not press the simile one step further, and say that in many cases we have loaded the cannon with the cannon ball of solid facts, not only without aiming it, but even without providing for that drive that might be likened to the powder that would make the ball move.

We cannot in our schools afford any longer to leave out the essential elements of motivation that will arouse interested self-activity, and the assurance that we are aiming where we wish the cannon ball to go.

I am quite sure that these ideas are familiar to all here, and that you all realize the trend at the present time toward thinking in terms of the individual, of the kind of a person he is going to be, of his likelihood of personal success and of some degree of assurance that he will contribute to the community.

Such thinking is fundamental to the educational process, and it seems certain that now, to a degree that never has been true in the history of American education, we must, instead of drifting, face the situation and analyze and provide for the needs of the school and its pupils in the light of increasing educational knowledge and of present world conditions and demands.

I think it is not exaggerating to say that not only in our financial life, but also in the adaptation of our schools to the demands of civilization, we are at a turning point—we face a crisis. Fortunately, many of the associations that are dealing with young people have gone on record in recent times in no equivocal terms. I am going to read you a few quotations, some of which I am sure are familiar to you, to bring to your minds the importance of individual development as shown by the thinking of various groups. I will start with the report of which our Chairman has already spoken, that of the Secondary Education Board. I think this statement of the objectives of secondary education is one of the most forward-looking ones that has been announced:

“That the objectives of secondary education should include the mastery of the essential processes of learning and the establishment of constructive attitudes and habits. Through fundamental training and appropriate experience the development of the individual's power should be directed toward:

“1. The acquisition and preservation of good health and emotional balance;

“2. The promotion of personal morality, worthy home and community membership, national and world citizenship. . . .

“3. Increasing ability to get information, to reason accurately about it, and to express in oral and written form the conclusions reached;

“4. The establishment of an adequate basis for higher education or individual occupation;

“5. The cultivation of such tastes and interests as may lead to the wise use of leisure.”

This statement would not have been made in such a form even a very few years ago. While it was made by a group representing primarily what are called the preparatory schools of the country, it very definitely indicates preparation for life

rather than only for further scholarship. It sets an aim in terms of personal powers and social adjustments.

The Report of the School and College Relations Committee of the Educational Records Bureau makes this brief but, I think, rather comprehensive statement, dealing particularly of course in terms of college preparation:

"Information regarding the personality development of pupils is of the greatest importance to schools and colleges because:

"1. Assuming adequate intellectual capacity, habits and attitudes outweigh any other factors in determining success or failure in schooling as well as in life.

"2. As complete knowledge of personal characteristics as can be obtained is essential in any plan of guidance.

"3. Failure to emphasize habits and attitudes results in unwise overstress on subjects and academic success."

Its first recommendation made to the colleges was "that colleges emphasize much more strongly the importance of information concerning personal characteristics as a criterion for judging candidates, and shall therefore encourage the study by schools of the traits, habits and attitudes of their pupils, the recording of such information in suitable form, and the submission of more complete and objective information as a part of the entrance requirements."

This committee's recommendations have gone to all of the colleges of the country and that particular recommendation has been almost universally approved by the colleges.

The American Council on Education has shown a great deal of interest in this field. It has had its Personnel Committee, as well as a committee of scientists that has been attempting to find out which are the most fundamental traits of human beings. The name of that committee is in rather difficult terms—"Unitary Differential Traits." No one knows yet how well it is going to succeed in finding such traits. The last time I heard the chairman speak of it, he said that as far as he could tell now there might be no differential traits, and if there were, they might not be unitary. At any rate, investigation is likely to give more definite knowledge as to which are the least and the most complicated of human traits.

A great deal has been done on the study of emotions, some of this also being under the direction of the American Council on Education. This work is not, however, advanced enough to do more than indicate the need and possibilities of this field.

The Progressive Education Association, through its Commission on School and College Relations, has shown its interest by the statements in the eight-year plan proposal. One of the principal aims of this investigation is stated as "Clearer Understanding of the Problems of our Civilization, and the Development of a Sense of Social Responsibility." Another has only the brief heading, "Guidance of Students," but under that guidance is included everything that we are discussing.

The degree to which individual institutions, schools, colleges and social agencies are thinking of this matter may be judged from the fact that when the Reports and Records Committee began to study the headings used either in giving or in getting information, it found over one hundred and fifty different characteristics listed. It is very difficult to say which are attitudes, which are habits and which are traits of other kinds. Therefore, in discussing them I shall not try to be too specific or too scientific in my use of such terms.

These one hundred and fifty headings had to do with types of personalities and the development of various powers and attributes. Many of the headings, of course, were duplicates, and some of them were not well chosen. The important fact, however, is that enough colleges, schools and other agencies were studying young people so that they had found this large number of headings about which they wished to be informed.

One difficulty in carrying out any scheme for finding the answer to questions in relation to these various characteristics is the tremendous intricacy of human nature and the consequent difficulty of analyzing an individual's development. Tests in this field are difficult to develop and have made only moderate progress, though the work of such men as Harts-horne and May deserves mention. Questionnaires have also been developed, which are to be answered by young people themselves. Through their large numbers of questions there is eventually worked out a map of the answerer's thinking,

emotional responses and likely behavior in different situations. In addition there are methods for the study of children by parents, teachers, or other observers, who record those things that seem to have significance in regard to the kind of persons the children are. Of these methods, teacher ratings of some controlled kind seem likely, for some time at least, to be the chief dependence of those trying to learn more about children.

More progress has been made in this field with young children than with older people. One of the reasons is that young children live with one person in our schools in such an intimate way that that one person has the opportunity of knowing them very well. Consequently, when such a person records the facts, with all that concerns the various children, there is eventually built up a reasonably clear picture of the kind of person each child is.

Various difficulties have arisen, however, in this kind of work. Unfortunately the persistence of the "marking" idea that has so dominated schools in academic fields has carried over to personality studies, so that teacher ratings on such a trait as honesty have been comparative rather than descriptive. This might not be serious if honesty were a single habit or a trait uninfluenced by circumstances. However, people differ in their honesty in truth telling, in regard to taking advantage in games or other situations, and in regard to property. Consequently a comparative rating is so indefinite in its application that it provides little that has analytical value.

To serve their purpose fully teachers' judgments should be as descriptive as possible, and the description should be based, to as great a degree as possible, on observed occurrences. It is only in this way that one can avoid too subjective an approach, and can obtain results that are likely to be valid.

Again, teachers have not always known what to observe. One might think that all teachers would have the same conception of what was essential, of what they should observe, but this is not true. Teachers have had neither a well-understood and organized purpose in observing nor a common language in recording. I suppose we shall never reach a time when we all will use words with the same shades of meaning,

but the present degree of difference in teachers' recording has proven a very serious handicap.

There has also been great difficulty in finding ways whereby teachers could keep records of the things they observed and the indications shown. I know of some schools where teachers have carried pads with them, so that the moment anything happened they could make a note of it, as that Jane had quarreled with Mary about this thing or that. On account of such difficulties there have been various attempts to find out what is most important, and to give teachers a somewhat common technique and language for use in child study.

One of the most successful of these attempts for younger pupils takes as different headings those things that teachers can well study about the pupils and then points out to the teachers what seems essential enough to be worth recording. I shall read you as a sample one column heading under the general topic, "Habit Formation." This uses no classifications; it has only the intent of guiding the teachers in their thinking:

"I. *Work Habits:*

1. Attention
2. Care and Neatness
3. Work Tempo
4. Industry
 - (a) Individual Work
 - (b) Group Work
5. Concentration and Persistence
6. Self-dependence

"II. *Use of Time:*

1. Prescribed Situations
2. Free Choice Situations
 - (a) Unassigned Periods
 - (b) Assigned Periods

Similar analyses are made to help judgments in relation to various heads under mastery of skills and knowledges, social and moral development, and the formation of certain habits.

The value of this kind of guidance for teachers lies in the fact that all the teachers analyze their pupils under this head-

ing and its divisions, writing full paragraphs, perhaps quoting occurrences that will illustrate various points. Consequently they will think in terms of certain desirable aims, they will be guided in their observance of their pupils, and they will have more nearly the same understanding concerning the personality development that is being discussed.

This is excellent where one teacher lives with one group of children, so that she knows the children well, and has the opportunity and the time for recording information about them. It becomes more difficult with a larger class, but it remains possible for one teacher, even with quite a large group. The whole picture changes, however, when a number of specialists meet children of one group, and also teach other groups, as is usual in American secondary schools. The specialist has a much heavier pupil load, he meets more children and has less time for recording, even less time for studying the children. Consequently an attempt to make such detailed analyses written out in paragraph form would add at the present time a burden that probably would be unbearable to the teachers. I hope some day we may reach the ideal that was stated by Dr. Morrison of Chicago University in some such words as these: "that teachers of the future would spend half time studying the pupils and the other half doing the things this study showed to be necessary." I am not certain about this division of time, but I quite agree with the idea that if one could put a considerable portion of his time on definite study of young people and then could carry out the things that study showed to be necessary, we should be approaching a millennium in our school work.

It is necessary, however, when we use specialists, to do something quite different from what is possible with young children. It is just as necessary that we shall pick out the information that is essential for understanding the pupils. It is much more necessary that we shall find a short-hand method of recording, that we shall find a way by which busy teachers can make a usable record of important information about their pupils, which they can use themselves and can pass on to others for their use.

There are a number of important criteria for choosing the

of power, and in each case has defined five types as its classifications. Undoubtedly the classifications carry a certain connotation of excellence. It is possible to compare, but the emphasis is on description. The intent is to predict what kind of a response can be expected of a particular pupil because of past experiences with him. The teacher is supposed to base judgment on objective evidence; not on "What do I have an impression this particular pupil is?" but on "What has this pupil done in various situations that leads me to believe that he is of a certain general type, or that he has reached a certain stage of development?"

This may sound somewhat vague or even impossible. It is, I believe, neither vague nor impossible. It has already been amply demonstrated that it is quite possible to know and describe different people in particular traits, so that those people can be readily distinguished. There will undoubtedly be some difficulty in putting any such method into completely general operation because of the inertia or opposition of some teachers. However, similar methods have been in successful use in scattered places for many years, and a group of about one hundred teachers who have just been experimenting with such a system have, on the whole, been very responsive and very much impressed by its possibilities. Occasionally there is one who reverts to the stage of believing more in unguided judgment than in any kind of assisted and verified judgments. This attitude can hardly be widespread nor can it persist in the face of the evidence on the other side. Granting that some teachers might be able to write extended essay type descriptions of pupils that would be vivid and accurate, nevertheless such a plan is not feasible for the purposes defined.

This cannot be adequately done by all the teachers dealing with a group of pupils under the usual conditions of American secondary schools because of limitations of time, of awareness to what is most important, and of ability to write such a description. If it is done by some only, the picture will naturally be incomplete. Even if all had the time and ability to do this, unless their attention was called to the particular information deemed most important, the reports would be so incomplete as to greatly lessen their value for any of the speci-

fied purposes. There would be little common understanding of the terms used, or the implications carried. The information would be too bulky for easy access to essential facts, and it would, when carried over a term of years for a particular pupil, lack the great value of that easy comparability over a long term which is so essential to the study of trends.

No teacher can afford to be so sure of his unguided judgment that he is willing to ignore attempts to give that judgment objectivity and comparability, and to make it understandable and valuable to others because of use of a language they will understand and of criteria that are commonly agreed upon.

The Reports and Records Committee, starting from the one hundred and fifty headings, has made a preliminary list that includes the list of ten of which I have spoken. The first step in the selection of traits was a subjective but nevertheless an analytical one. The committee started by grouping together those trait names that seemed to mean much the same thing. For instance, there might be six words that seemed to be so nearly alike that the best word of the six could be chosen because it would fulfill all that the various institutions needed. The directors of college admissions who were on the committee decided whether knowledge concerning particular traits seemed to them important information for accepting or refusing candidates to college or for college guidance. Those working in the schools were asked to what extent knowledge about such traits would be of value for guidance, and whether teachers could judge concerning them. The committee tried to get every viewpoint that might result from studying or using studies of traits of various kinds. One heading after another either was absorbed into one of the few major groupings, or it proved to have some objection to its use that made its retention inadvisable, or else it seemed not to be usable for the purposes decided upon. In this way, over a considerable period of time, the list of traits was formulated.

After this the committee was ready for the next step, which included a scientific study of its results. About one hundred teachers in various schools were asked to classify pupils, using the types and definitions that had been made by the committee. The results of that study, and the suggestions and criticisms

of the teachers will be used in a restudy of the list of traits and their sub-types.

The present list includes ability to obtain information from sources other than reading, attitude to one's responsibilities: dependability, creativeness and imagination, influence, inquiring mind, openmindedness, perseverance, the power and habit of analysis; the habit of reaching conclusions on the basis of valid evidence, reading ability, standards of accomplishment (or urge to do one's best), energy or vitality, emotional response and emotional stability, thoughtfulness or the habit of reflection, integrity, moral courage and personal relationships. The last one may be subdivided to include personal acceptability in a group, and general attitude toward group living.

It is the committee's belief that some of these human attributes can best be dealt with by defining common types into which pupils are likely to fit, that for others some defined word or phrase may prove most descriptive, while in still others there may prove necessary a short paragraph describing any unusual response. A comprehensive manual of directions must of course be prepared.

The first ten characteristics have now been analyzed into types, though the results are not considered final.

As an example of the type definition method I will give the committee's analysis of "*Attitude to One's Responsibilities: Dependability.*" This note precedes the type definitions:

"While this classification depends largely on attitude toward one's duties and opportunities, the demonstration of the attitude in actual practice is the objective evidence on which one's placement depends. Unusual devotion to a particular undertaking by one not in general highly developed in this attitude should be noted separately."

"The First Type: Those who are dependable in carrying out whatever is undertaken. They do not confine their efforts to what is assigned to them by others, but also develop an absorption through active initiative and interest that results in their carrying on unrequired investigation or other work for which they see need or in which they see value."

I think you will at once recognize this rather unusual type

of person. It is unfortunate that there are not more of them, and it is very important that they all be recognized when they do exist. There is a note under this type saying that this attitude might be shown either in connection with school work or with pupil activities. There are also examples of different ways in which pupils might show this particular type of response and dependability. I might say that it is the purpose of the committee to add greatly to its list of illustrations, for it wishes to do everything that can be done to make the teachers' judgments as well founded as possible.

"The Second Type: Those who are dependable and conscientious in doing what is required of them, performing their duties without the need of any compulsion from others."

This is also a very important class of people. It lacks the extra flair that is in the first group that carries them beyond what others may suggest, that makes them do the thing the teacher hasn't asked for. It is very fortunate if a large percentage of our population falls even in the second group.

"The Third Type: Those who have the general intention of performing their duties conscientiously, but fail in carrying out this intention often enough so that others are forced to assume some responsibility for them."

There is a note under this that such pupils usually prepare their work or carry their other responsibilities, but occasionally need reminding or are open to criticism in regard to careless or incomplete work whether in classroom or in other activities.

"The Fourth Type: Those who are decidedly irregular in their attention and application, so that others must carry the responsibility for their work."

The note under this says that a teacher is forced to apply more or less continuous pressure to obtain results at all consistent with the ability of such a pupil, and that others must supplement his contribution to an activity in which he is engaged.

"The Fifth Type: Those who will not or cannot hold themselves to their work even with an undue amount of help."

The note here is that such a pupil requires immediate investigation of the reason for such a serious condition.

I think this will give some understanding of what I mean by the attempt to provide the teacher with a shorthand method of recording. Here are five types. They are not absolutely exclusive. Unquestionably, they do not include every type of person that exists. They do nevertheless fairly well indicate the most common types that occur in our schools in relation to this particular trait.

Consequently, in place of a teacher's trying to write at length about the dependability of a certain pupil, that teacher, when accustomed to the use of this set of definitions, can simply indicate, perhaps by a number only, the most common type of response of the pupil. If the teacher uses several other headings analyzed in the same way, it becomes possible, by recording a few keyed letters or numbers, to indicate types of responses for the person in a number of traits and therefore to give an important part of the description of that personality.

You may say, "This teacher has the boy in English; that teacher has him in mathematics. The results may be totally different in those two fields." It isn't only similarities in the pictures given by different teachers,—it is differences as well that are significant. If there is a general consensus of opinion about some one thing, this probably indicates a fact that is true about that child, but if you find a pupil who responds here and doesn't respond there, that in itself has significance and it is also a reason for further study. The cause may relate to the pupil's response to subject fields, it may be a matter of the personalities of the child and the teacher, or there may be some other influences that bring it about.

But suppose there is accumulated over some years a study by every teacher who has had the opportunity to know a certain pupil. It is evident that the similarities or differences in judgments will gradually build themselves up if they have importance or iron themselves out if they are not real. There will be evident certain very definite tendencies that will be shown by an accumulation of facts about the pupil. There will be other evidence that seems to be irrelevant or inconsistent and therefore needs study for its explanation.

The important point is that the analyses of all the teachers in one year, with the help of the other facts known by the school, will give a picture of the pupil's stage of development at that time. A similar picture will be made the next year and again the next, so that there is obtained cumulative evidence of growth or lack of it in the most essential traits. Marked changes may occur during a school year, and there will be provision for showing that fact.

There will unquestionably be many pupils who cannot be put into any common classifications. Such extreme variations will be indicated by notes.

There may be vital facts that synthesize the other information and make a living human being out of what might otherwise be only Bertillon measurements of personality, and there must therefore be a place for the recording of such additional information.

The committee has no intention of excluding any facts or judgments that may have significance. It hopes to make it easy to judge and record some commonly accepted fundamentals, to make them easy of access and understanding for further study and use, and to emphasize the importance of the cumulative feature of such studies.

Behind any such picture as a teacher may make, there must be untold study of the pupil day after day, consciousness of the fact that it is the kind of person that is being made that is the essential test of education. That can never be avoided, and I am not ready to apologize to any one for any amount of time that a teacher may find it necessary to spend on the analysis of the possibilities and needs of his pupils. It does seem very important that the recording shall not take so much time that it hinders such study or the corrective work based on it. The recording machinery therefore must be as simple as possible, which fact, I repeat, is an important reason for the type form of classification.

It is the committee's hope then that when its list of attitudes, habits and traits is tested and complete, when its definitions of types and its other provisions for judging and recording facts concerning a pupil's characteristics are ready for use,

there will have been developed the most complete way in which a teacher, by a shorthand method that requires the least possible use of time, can record whatever he knows about a pupil and can pass it on to any one else who is familiar with this method of studying children, in such form that the other person will know what is meant. I can foresee the time when all the schools and colleges of the country will be talking the same language when they discuss those things that have to do with personality either in relation to college entrance or to that more important goal of intelligent pupil development and guidance.

I believe that such a system as this will make it possible for a school to bring out the salient facts for the use of college admissions officers in a way that has behind it not unsupported opinion, but carefully recorded judgments based on objective evidence, on observation of actual responses and happenings. I believe therefore that for college admissions officers alone it will have tremendous value.

Yet I am not nearly as much interested in that as I am in the fact that it furnishes material for immediate school use.

I started by saying that American education had failed to fulfill its promise. I believe this characteristic study is the first step toward making it possible for it to fulfill its promise. You all know H. G. Well's statement concerning the "race between Catastrophe and Education," and very likely his later comment that education had given up the race. Education hasn't given up the race. Education is using the spurs. Its first gain will come through better understanding of its human material, its needs and tendencies.

We are now using scholastic aptitude tests to find out the mental quality of our pupils. We are using various kinds of comparable tests to determine the degree of power and mastery obtained in various subject fields. We cannot accomplish what must be done unless we complete the picture, unless we find out about the pupils' attitudes, their habits, their character traits, and determine what is necessary to make these constructive. The first step is the analysis. I have no time today, and it is not in the scope of my paper to discuss what

ought to be done after one has made the analysis, but of course every one of us knows that the test will come then. The success of remedial work will be the real proof of the practicality of anything done in studying young people, but one cannot use the remedy until the diagnosis has been made. However, even though nothing came out of such a study as this beyond an emphasis in the minds of every teacher on the importance of the kind of person who is to come out of the school, if only we all came to realize that the essential aim was a person faced in the right direction, even then I think you will admit that such a study would have justified itself.

But I am sure we are going further than that. I am sure we are making a long step toward giving an accurate diagnosis to the degree to which our present knowledge makes it possible. I believe that on this we can build sound, remedial practices so that we shall, with every child, in every one of our schools, eventually say, "What does this pupil need today? What is indicated by the information we have in hand as the necessary next step in his development?" And then we shall try to give it to him. If that day comes, if we find we can make these studies, record them in usable form, and take the next steps in remedying those things that need remedying, and in offering those opportunities that are shown to be desirable, we shall then be able to face civilization, and say, "Yes, we have added to our education Direction. We are not just turning out people who have powers and skills and knowledges, without knowing how they are going to use them. We are trying to see that they set their faces toward the future, that they are trying to make the most of themselves, that they realize their privilege and duty to make the greatest contribution possible to their fellowmen."

EUGENE RANDOLPH SMITH,
*Beaver Country Day School,
Chestnut Hill, Mass.*

Measurement in Educational Experimentation¹

INTRODUCTION BY DR. BEN D. WOOD

This morning we have the privilege of hearing Dean McConn. He has been one of the severest critics of the testing movement that we have had and one of its most devoted and helpful friends. In fact, you can tell, often, what side of the controversy Dean McConn favors by the severity with which he criticizes it. He has also been known to find fault with the progressives, and I therefore can assure you that he is their friend. It gives me great pleasure to present Dean McConn.

ADDRESS OF DEAN MAX MCCONN

THE title of this paper has been carefully composed so as to look and sound decorously drab and unexciting. This has been done in accordance with that code of etiquette which proscribes any semblance of human interest in the titles of addresses at educational meetings.

As a matter of fact, however, the real topic which my title so punctiliously drapes is a distinctly controversial one.

The nature of the controversy may be indicated by reference to the four groups sponsoring this "Second Educational Conference," as listed on the first page of our program. You have all scanned that list. It includes (1) the American Council on Education Committees on Personnel Methods and on Educational Testing, (2) the Cooperative Test Service, (3) the Educational Records Bureau, and (4) the Progressive Education Association's Commission on the Relation of School and College. It will be noted at once that the first three of those groups are concerned, not solely, of course, nor ultimately, but directly and immediately, with testing and measurement and records; whereas the fourth group, the Commission of the

¹ Presented at the Third Annual Meeting of Institutional Members of the Educational Records Bureau, New York City, November 3, 1933.

Progressive Education Association, has much wider objectives, among which testing and measurement and records may be regarded as playing only a very minor and incidental rôle.

It might be expected that some difference of attitude and emphasis and point of view would develop among partners thus assorted, and it is a fact that such difference has actually developed to a point which I fear fully justifies the word "controversy." As a controversy it has so far been kept for the most part under cover, in the form of doubts and reservations and smouldering suspicions, freely and fervently expressed by the members of each party among themselves, but not as yet flung openly in each other's teeth.

But this stage could not last much longer, and in any case it is not a happy or healthy situation. Accordingly, it is the purpose of this paper to drag this controversy forth into the light of day, to air it somewhat thoroughly, and quite possibly to give occasion for a still more thorough airing at the discussion session this afternoon.

II

The dragging forth process I hope to accomplish by stating in turn, as well as I can, the two opposing points of view; and, here at the beginning, I shall endeavor to present each side with some of that exaggeration and heat and bias in which the proponents of each are inclined to indulge in their private "bull sessions" together. Because, in this case as in many others, the exaggeration and heat and bias are essential parts of the controversy. Perhaps, in fact, it may turn out that those aspects of the matter represent the major part of the difference.

First, then, let me try to set forth the doubts and questionings of those devotees of tests and measurement who are just now looking somewhat askance at the project of the Progressive Education Association. They are inclined to say that the progressives don't really know what they want to do or how they want to do it, that they have not been able to agree on any common curriculum or common subject matter, and that, since they appear to be unwilling to have their results

measured by any standardized and comparable tests, neither they nor anybody else will know, when they get through, what, if anything, they have accomplished or demonstrated. One lively correspondent of mine has expressed it thus: that their whole project seems likely to degenerate into "a disjointed series of spasms on the part of individual schools and bolshevistic individual teachers, without any common or understandable measuring rod being applied to any two of the institutions or classes."

Perhaps that may serve for that side. Now for the retort of the more radical progressives.

They are wont to declare—these more radical progressives—that the existing tests are no good. Or, in milder mood, they may assert merely that they are "inadequate"—which, however, means, I take it, much the same thing. More specifically, they claim that the existing tests measure only mere information, mere facts.

You will all recall that Miss Daisy Ashford in *The Young Visitors* described certain persons as being "very mere." That is the way some of the progressives apparently regard information and facts; they practically never refer to them without calling them "mere." But this is a digression. To continue:

The members of this group assert that they are very little interested in information, facts—whether "mere" or otherwise—that what they are concerned with in their students is such things as growth and power, attitudes, understandings, appreciations, and the like, and that the existing tests do not measure any of these things, and therefore are of no substantial use.

And then, by way of counter-offensive, carrying the war into the enemy's country, they are likely to claim that any existing test or group of tests, if it is known that it is to be used, will inevitably become a goal of instruction, will be prepared for, "crammed" for, so that the pupils may make a good showing, and will thus come to dominate the curriculum and the subject matter of individual courses and the methods of teaching, and consequently will check free experimentation and kill spontaneity and stifle and devitalize the whole business. If we are

to have tests, they say, why not go on as we were, with the College Board Examinations? Why should we go to great trouble to set up a so-called experiment if we are merely to exchange our old shackles for new ones which may be equally galling?

This, you will see, comes close to being the exact opposite of the position taken by the more conservative testers. And so we have the setting for a very pretty quarrel, or, to speak soberly, a somewhat ugly quarrel, which, if it develops, may do substantial damage to both causes, that of educational testing and measurement and that of progressive education.

III

So let us examine these two opposing positions, which I have deliberately stated above with some exaggeration and bias, as I proposed at the beginning to do—but certainly with no more of these attributes than I, and most of you, have actually seen and heard exhibited in conversations among the extremists on both sides; let us examine the two positions, as calmly as we can, to see if we may be able to strip away the exaggeration and bias and find what remains on each side that is valid and significant. If we should be successful in doing only that, we should make a substantial contribution to both causes.

But, as a matter of fact, I propose also to suggest in my conclusion what seems to me a possible synthesis, a method of procedure in testing in educational experimentation which may solve the apparent dilemma—may satisfy those who are chiefly interested for the present in educational measurement, and yet may be acceptable to the most freedom-loving and experimental progressives.

This, of course, is a large order, and my proposed synthesis may draw only brickbats in the discussion this afternoon. But even so my temerity may stimulate some more successful conciliator and synthesizer to follow either this afternoon or later.

Since I have several times used the somewhat ugly word "bias," it may be only proper at this point for me to take time out for a couple of minutes to give you what the astronomers would call my own "personal equation," my own bias and preju-

dice. Looking at myself as objectively as I can, I should say that in this matter I am that despicable and unhappy creature, a middle-of-the-road man—who can, of course, expect sympathy and support from neither side. I am like Mr. Snell of the Rainbow Inn in *Silas Marner*, inclined to cry, "You're both right and both wrong; the truth lies atween you." More specifically: I am deeply interested in educational tests; of the technical side of these instruments I know substantially nothing; but as a personnel officer, a counselor of college students, I make daily use of test results, and I am thoroughly convinced that with the help of these results I am able to do my work with much better success than I was able to attain before such aids became available. On the other hand, I subscribe with equal conviction to the progressive doctrines of interest and individualization; indeed I agree with the progressives even in regard to the "mereness" of information; I too have little use for facts in education except as they may contribute to worthwhile understandings and attitudes and appreciations; and I deplore as strongly as anyone any domination and standardization of curriculum or methods by any testing or measurement program. In short, it is—of course—exactly my own prejudice and bias that lead me to attempt, in my own thinking, to synthesize the two movements and conserve the values I seem to see in both.

With that out of the way, let us turn now to the position of those measurement people who are distrustful of the progressive program.

When those people say that the progressives do not know what they want to do or how they want to do it, I disagree with them entirely. What those people should say in this connection is that *they* don't understand what the progressives want to do or how. The progressives themselves have, as a matter of fact, attained a quite remarkable unanimity on these points.

The proof of this assertion, for me, lies in the proceedings at the conference held in Atlantic City last March by that Commission of the Progressive Education Association, which is one of the sponsoring groups for these meetings. The pur-

pose of that conference was the final selection, by the Commission and its Directing Committee, of the twenty-odd secondary schools to participate in the current project for progressive experimentation at the secondary level; and the selection was to be based, in the main, on the plans for experimentation to be presented there by the representatives of nearly fifty schools. Please note that these plans were entirely devised and formulated by the faculties of the different schools, working separately and independently; the Commission having laid down no specifications and in fact offered no suggestions. Yet the many plans presented exhibited the most remarkable homogeneity, *not only* of purpose and general direction and general pattern, but in concrete proposals for the organization of curricula, subject-matter content, subject-matter grouping, and teaching methods. Before I was privileged to attend that conference I too sometimes wondered whether we progressives represented anything more than a congeries of assorted bolsheviks; but since that conference I am convinced that it is the progressives who do know what they want to do and why and how. In these days it is rather the conservatives who have no answers to such questions; else why, in the face of revolutionary change, should they continue to do only what has always been done in the past?

But when the measurement people go on to say that if the progressives will not have their results measured by standardized and comparable tests neither they nor anybody else will know, when they get through, what, if anything, they have accomplished and shown, then my sympathy and conviction swerve sharply to their side. On this point they seem to me indisputably right. The Progressive Education Association's Commission constantly refer to their project as an *experiment*. It is as an experiment that it has been accepted by more than two hundred and fifty colleges. It is as an experiment that it has been supported financially through the Carnegie Foundation and the Carnegie Corporation, and as an experiment that it has attracted the interest of the general educational public. And the word "experiment," drawn from the vocabulary of the exact sciences, unquestionably implies a procedure that shall

be watched and checked and measured with all possible precision, and shall yield results expressed as far as possible in exact, quantitative, comparable terms.

It seems to me perfectly clear, therefore, that if this progressive project is to retain, during its progress, the support of the colleges and of the Foundations and the interest of the educational public, it must call to its aid every available kind of measurement. And that it must do this also if its final report, when the project is concluded in 1944, is to have any wide effect on secondary education in this country or on the attitude of the colleges towards progressive schools or progressive procedures in schools. Neither the schools in general nor the colleges will take much stock in generalized claims of achievement or personal qualitative appraisals; but they can be convinced, even against their prejudices, by comparable measurements.

IV

But it is time now to listen again to the caveats of the more radical progressives against what they usually style "the existing tests."

I have quoted them as declaring that all the existing tests are "inadequate." Well, if by that they mean, as I think they do, that no existing test or group of tests can measure the attainment of the more general, long-term goals of the educative process—such goals as the progressives suggest, without precise definition, when they use such words as "power" and "understandings" and "attitudes" and "appreciations"—then I agree absolutely, and I have yet to encounter the most rabid tester who does not also agree. So we may concede that much.

But the same people go on to make their charge more specific by saying that the existing tests test only for information, facts. With that assertion I am not prepared to concur quite so fully. Let us agree that it is partly true, perhaps even largely true. But certainly the measurement people are consciously attacking this deficiency with both vigor and ingenuity. You will listen at one o'clock this afternoon to Dr.

Lindquist of the University of Iowa on "The Technique of Constructing Tests in Relation to Various Uses of Test Results." I presume, and hope, that he will mention, at least in passing, the fact that for several years now the Iowa Achievement Tests have been constructed with the deliberate purpose to *defeat* rote learning and mechanical drill procedures. As I have written elsewhere² of these tests: "The questions used regularly demand, not mere facts—names, dates, definitions, formulae, laws—but the interpretation of facts by the recognition of relationships, sequences, causes, results, implications, contradictions, and the like." Of course I mention these Iowa tests as one example only of what all the testers are now striving to do. How well they have thus far succeeded in this effort I am not competent to judge; but in view of their truly remarkable achievements in general during the brief quarter-century they have been at work, I have a good deal of faith that they will advance, slowly perhaps, but surely, into this difficult terrain.

But of course the radical progressive objectors do not believe that, as yet, the testers have made any worth-while progress in this respect. So far, they say, all the tests are information tests, pure and simple. So be it! I do not myself think they are quite right when they say that—I think they are a little behind the times—but for the sake of argument let us grant that it is so. What then? It does not seem to me to follow that even mere information tests are of no value to progressives. It seems to me that admittedly factual tests can be of the greatest utility in the *indirect* measurement of the kinds of achievement to which the progressives aspire.

Let me pause to point out that the minute we leave the exact sciences, physics and chemistry, we leave behind for the most part the possibility of *direct* testing and measurement. In geology and astronomy, in biology, and still more in psychology and sociology, our scientists can seldom measure directly the total phenomenon or result or development in which they are interested. Usually they must content themselves

² "Educational Guidance Is Now Possible," in *The Educational Record*, Vol. 14, No. 4, October, 1933.

with measuring some aspect or incident or symptom, for which they have been able to devise a technique of measurement, and then draw inferences as to the meaning of their results with respect to the total process with which they are really concerned. In medicine, for example, what the physician really wants to measure is the progress of a disease or a cure. He can almost never do that directly, any more than we can measure directly growth in power or improvement of social attitudes. But the physician does not therefore repudiate all measurement. On the contrary he assiduously and systematically measures everything he can measure—temperature, pulse, blood count, urinal content, etc., and from his exact and comparable data relating to these mere incidents and symptoms draws, by inference, important indications for diagnosis and therapy. In the field of education, where all the uncertainties of biology, psychology, and sociology are intermingled and concentrated, we can hardly complain if we must usually proceed by a similar indirection.

The application of all this to the use of information tests in progressive education will be obvious. Granted that as progressives we are not interested in information for its own sake, any more than the physician is interested in pulse or temperature as such, we may still be deeply and constantly interested in the results of factual tests for their indications of progress or lack of progress towards our own legitimate goals.

Choosing to be tedious rather than to risk vagueness, I propose to try to drive this point home—because it seems to me really important. It is the faith of progressives that if we faithfully employ in the teaching process and in curriculum building and in guidance the principles of interest and individualization we shall attain an effectiveness in learning that cannot possibly be achieved when these principles are ignored, as they commonly are in much current schooling; that a student working in a particular field because of a genuine self-felt interest will master the material in that field with extraordinary thoroughness and precision and retain it with equally remarkable completeness and accuracy. True, we are not much interested in the mere volume of information thus acquired

and held in memory. We are interested rather because we believe that facts and ideas mastered in this way penetrate to the active intellectual life, as compelled rote learning never does, reach the emotions, develop what we call understandings and attitudes and appreciations, and eventuate in conduct and code. But incidental to the total process is the peculiarly effective mastery of factual material in the student's chosen field. And there is the one point in the whole process where we can at present test and obtain comparable quantitative data. We cannot do much perhaps in the measurement of interest at the beginning of the process, or anything at all as yet in the measurement of emotional reactions and understandings and appreciations at the end. But we do have in the standardized objective achievement test a sort of stethoscope which can be applied in the middle. And so it seems to me we ought to be eager and systematic in the use of that available instrument.

If in particular cases we find a fine mastery of materials in the students' chosen fields, we may be reasonably sure that we have been successful in our use of the principles of interest and individualization and are making progress towards our higher goals. And if in other cases the achievement tests uncover ineffective learning even of facts—I do not mean in all the usual fields, but in the chosen fields—then it seems to me we may well question whether we have been successful in our attempted use of progressive principles and whether we are on our way to progressive goals or any goals at all.

I confidently expect, moreover, that if we will make free use of achievement tests—granting that they are mere information tests—in the schools now working under the Commission of the Progressive Education Association, and in other progressive experimentation in school and college, we shall, by this device alone, demonstrate the overwhelming superiority of progressive procedures. It seems to me obvious in advance that students working eagerly and ardently in fields in which real interest has been aroused will acquire, even incidentally, a mastery of factual material in those fields surpassing anything that routine procedures can produce. I venture to assert that this has already been demonstrated at those colleges—Swarth-

more, Lehigh, and others—which have adopted the progressive device of the major field and the comprehensive examination therein, and I am confident of the same outcome at the secondary level.

In passing, let me call attention to the splendid strategic value, to the progressive cause, of thus beating the enemy on their own ground.

V

But we have still to examine the most serious objection which the radical progressives raise against the existing tests and—if I understand them correctly—against any conceivable tests, namely, that any testing program inevitably becomes itself the goal of instruction and hence dominates, standardizes, stifles, and devitalizes the whole of the teaching process subjected to it.

On this point we must, I think, admit that the objectors have history on their side. Such has certainly been the outcome of many notable testing programs in the past. We all know what the Regents' Examinations have done to the high schools of the State of New York and what the College Board Examinations in their original form did to the whole group of Eastern preparatory schools. (Of course, it should be noted, in parenthesis, that the College Board situation is very different now, since they have developed their comprehensive examinations and scholastic aptitude test, and with their newly proposed "qualifying examinations" we have, it seems to me, the first recorded case in natural history where the leopard has changed his spots. But to proceed.) The Pennsylvania Study, in giving new-type comprehensive examinations only three times in the colleges of Pennsylvania, uncovered pretty clear evidence of attempts to "coach" for those examinations. And all of us, working in either school or college, have watched general departmental examinations operate in the same way, becoming goals and standardizers for all the teachers and students in the department. It is not necessary to multiply examples.

But it may be worth while to inquire whether these unhappy

results are inherent in the nature of tests and examinations themselves—whether they have not followed rather from the use we have hitherto made of tests and examinations.

Up to the immediate present we have been accustomed to use examinations exclusively on crucial occasions, to be followed by immediate and drastic results for the examinee, based upon one spasmodic deliverance on his part under conditions of special stress and strain. We have used them to determine whether a man shall receive the degree of doctor of philosophy or the license to practice medicine or law; whether a college student shall be graduated; whether a high school boy may be admitted to the college of his choice; and at all levels whether students shall be promoted or left behind and be awarded praise or blame.

So long as we use examinations and tests, of any type whatsoever, in that fashion, I agree with the radical progressives that the examination program will inevitably become the actual goal of instruction for students and teachers alike, and will tend to defeat all or most worth-while educational purposes.

But there is another possible way of using examinations and tests, which has been tried in part in a very few schools for a very few years, and which seems to me to conserve and enhance their measurement values and to avoid their dangers. And this brings me to that attempt at a constructive proposal of which I warned you at the beginning: a possible synthesis; a method of procedure in testing in educational experimentation which may solve the apparent dilemma. This suggestion is offered, I trust, with due modesty, certainly with some trepidation. It may serve at least as something to shoot at in the discussion group this afternoon. It is simply this:

That in the schools working under the current project of the Progressive Education Association and in other progressive experimentation we should abandon once for all what I will call the end-examination: the examination or test of any kind given at the end of the student's course, or at the end of the year or semester, or at other regular or stated intervals, to determine either in whole or in substantial degree graduation or failure to graduate, promotion or demotion, honors, prizes, demerits, exclusion, or the like.

But that we should by no means abandon examination and testing.

That we should rather multiply examinations and tests, of many kinds, using them frequently, *but always informally, casually, and skeptically*; record the results, of course; correlate and study these results; study particularly the patterns of results in each student's cumulative record, in conjunction with personal impressions, teachers' grades, or better teachers' estimates, and all available facts in regard to the student's background and achievement; and base the necessary administrative decisions with respect to graduation, promotion, classification, and guidance on *the total picture* of the student's abilities, aptitudes, character, and potentialities—to which total picture a considerable number of comparable test results would seem to me to contribute a vitally necessary part.

I have said that in my opinion this kind of examining and testing would escape the dangers which have historically accompanied examination procedures. The fact is that we humans, old and young, enjoy tests—provided we are not going to be hanged if we do badly. Please recall the vogue of the “Ask Me Another” books; the publishers found it worth while to issue three successive volumes. And every crossword puzzle is a test. So is every game of bridge or chess or billiards or tennis or golf—a competitive test of some kind of ability or achievement, and a test yielding comparable results. If all human games and sports partake of the nature of tests, why cannot we make of our necessary academic testing another school sport? We *can* do this *if* we dis sever it from the extraneous and illogical rewards and punishments which we have hitherto attached to it. The trouble is we educators have professionalized this sport of being tested. What we need to do is to give it the amateur status and keep it strictly amateur.

To be concrete: it seems to me that if I were in charge of a school engaged in an educational experiment I should spring tests frequently throughout the year, using practically every kind that the Educational Records Bureau could find for me—psychological tests, aptitude tests, vocational interest tests, personality rating scales, and quite a lot of achievement tests. I think I should give some of the College Board Examinations,

which are probably the finest examinations of the subjective type which have ever been concocted or administered, and which have done harm only because of the purpose for which they have been used. And of course I should have all the results recorded on each student's cumulative record. But I should not base any decision on any one result or any two or three results, but only on the total picture or diagram for the individual student, to which any one examination or test would contribute only a single stroke or dot. And because it would be known that that was the case, I believe the fear and strain of examinations and all thought of "coaching" for them or modifying procedures on their account would die out and they would take their place as an important amateur sport.

Let me add, in conclusion, that if some such solution as this should enable the schools working in the current project of the Progressive Education Association to make full and free use of measurement and testing without injury to the freedom of experimentation, the student records sent up to the colleges would in my opinion—and I speak as the chairman of a committee on admissions—prove so convincing and helpful that they would quickly supersede all other methods of admission.

Obviously, also, such a solution would find us furnished at the end of the experiment with an ample body of definite and comparable data, to be used in a report which, we may hope, will prove the case for progressive education up to the hilt, and may lead to far-reaching changes in educational practice throughout the nation.

MAX MCCONN,
Lehigh University.

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AMERICAN COUNCIL ON EDUCATION

Education and the Prevention of Crime¹

ANY member of the United States Senate would be flattered by an invitation to speak to this group. I say this because the National Education Association is representative of what in many respects is the most important profession practiced by men and women.

We have chosen in America to turn over to the school teachers not only those duties which are naturally theirs, but also many of the functions which should be performed in the home. We have come to expect the teacher to instruct our children in manners, personal hygiene, social etiquette, and the household arts. We expect the teacher to give by precept and example that moral and ethical training which in other times was imparted by the home and the church.

At this moment I have no desire to challenge the fundamental wisdom of this, our almost universal custom. It is mentioned merely to prepare the way for certain comments which will follow.

Before entering upon that discussion, let me pay a brief tribute to the teacher. I regard that public servant as the most potent factor in the training of our children in honesty, worthy ambition, self control, and substantial preparation for merited success in the battle of life.

It happens many times that the influence of an inspiring teacher has neutralized evil tendencies which environment has imposed upon unfortunate children. No thoughtful person who analyzes his own mind can fail to find reason for gratitude to this or that teacher for the rich contribution of noble thoughts and desires planted there during school days.

The teacher is the most self-sacrificing, hard-working and poorly paid individual of all those included in the schedule of public servants. That is my honest conviction and one I have held for many years.

¹ Address delivered before the National Education Association, Department of Superintendence, Cleveland, Ohio, February 28, 1934.

Certain recent experiences of my own have given me a growing belief that America must lean still more heavily upon the school teacher. As chairman of a committee appointed by the United States Senate to investigate crime, it has been my duty to listen to the testimony of hundreds of witnesses. What we have learned centers upon one point—the necessity of preventing juvenile delinquency. To accomplish this, the schools can do more than all other agencies within public control.

The importance of what I shall have to say to you is emphasized by the statistics of crime. In the United States today the average age of the criminal is 23 years. The largest age group is found at 19 and the next largest group at 18. The seeds of moral delinquency sown and grown during school age, develop into evil plants, the fruits of which are publicly displayed by boys and girls long before maturity of their minds and bodies.

In saying these things to this particular group, I am not unmindful that the members of your association have long been concerned over the problems which crime presents. I am aware of the serious thought you have given this subject and am acquainted with your Research Bulletin on "Crime Prevention Through Education," published in 1932, and your "Tenth Yearbook on Character Education," published in the same year.

I am depending on your wide background of knowledge to fill in an outline of the facts for which I have but brief space. I must trust your trained imaginations to supply the details, depending upon your proven patriotism and loyalty to perfect and carry out some such plan as the one I shall propose.

First let me present a brief statement of fact: From several sources, apparently authoritative estimates of the cost of crime, it appears to total approximately one-fourth of our national income. This sum, as is pointed out in your bulletin, exceeds by at least three times our total expenditures for education. We can agree, I believe, that the cost of crime in money and in reduced morality of the people is devastating beyond computation.

You know better than I how much the situation has been

aggravated by recent publicity given the activities within the law of certain metropolitan bankers, utility heads and business executives. Such infractions of the moral law reported by the press, are dramatic presentations which must have undermined the public morale and the morals of many individuals. Your minds will quickly jump to acts within your own knowledge, where perhaps there may have been smaller monetary losses but which are equally distressing examples of that lack of the sense of trusteeship and general public spirit which should characterize men of affairs. The anti-social conduct of persons operating within the law, ruthlessly exploiting the economic resources of the public, has inflamed the minds and emotions of criminals and weaklings. Recognized as one of the major causes of our economic condition, those acts have added to the general social unrest.

In short, the factors that have acted to promote criminality have been added to of late because of economic conditions, and what the average man believes is the chief cause of our economic distress. No matter how we approach the problem, we surely must agree that the menace of anti-social behavior and actual crime is greater than ever before.

Where does crime begin? The answer to that question will determine what we should do about it. While there are many causes, no doubt, yet there will be no dispute of the thesis that the perfect home should develop the perfect character.

Most of us regard character building as the primary responsibility of the home. But, if I may jump to my conclusion on this point, I am forced to recognize that there is no immediate hope of greatly improving the home conditions of those who may later follow criminal careers. To accomplish this end is a long range process.

We think of the church as having a heavy responsibility in character building. But as regards this, I can criticize no church except my own. For any except my own denomination, I have no right to comment upon the adequacy of its character building program or to make recommendations for the extension of its work. I will say of my own denomination that I believe there is much more it should be doing. But whatever

the churches may do in the future, we cannot turn to them for an immediate and major attack on the problem of crime. I pause only long enough to express confidence that the church will lend support to a well planned program of prevention.

This brings me to the schools. It is an old custom, familiar to you, to carry to the door-step of the school all the problems that cannot be solved in the home or elsewhere in the community. To blame the schools and the teachers appears to be one of the diversions of the American people. But it is not in this spirit that I approach the subject under discussion.

I could devote my available time to reviewing the forces which have tended to transfer from the home to the school almost the entire responsibility for the welfare of children. To you this is a well known story. But when I turn my thoughts to what the schools can and should do in the matter before us, I have been wondering how the public would respond to a new plan. What would happen to a proposal that the public schools assume the responsibility for a basic crime prevention program?

In face of the alarming facts about crime and the growing anti-social conduct within the law, may not the public be wondering what has happened and why? How many are inquiring how such a state of affairs has come to pass in a country that has so liberally supported schools for the express purpose of insuring good citizenship?

Personally, of course, I do not place upon the American public school system primary responsibility for this crisis. But what shall we say in reply to those who charge the public schools with a share of the blame?

The report and a digest of the hearings of our Senate subcommittee which will soon be off the press, contain pointed discussions of this question. I want to refer you to this report for comments on the merits of the public school record of past performance. Whatever may be your own conclusions, I know you are ready to face the issue of your future responsibilities in this field and of course it is the future alone that we can do anything about, whether in the line of your duty or mine.

One of the questions I want to ask you today is this:

Does the habit of appraising the influences of schools exclusively in terms of intellectual achievement and manual skill have anything or everything to do with our trouble?

To define clearly what I mean I want to make reference to two recent publications: First, the committee of the American Association of University Professors, in its report issued last May, stated that the purpose of college teaching is to "induce self-propelled intellectual activity on the part of the student."

The second reference is to a report of the Commission on the Social Studies, entitled: "A Charter for the Social Sciences in the Schools," drafted by Charles A. Beard. This is intended to emphasize the value of scholarship and skill in scientific method as a primary dominating objective. This point of view is epitomized on the 99th page of the report, which I quote:

"All the way through the schools the process may be followed, *ever sharpening the mind*" (the italics are mine) "by increasing the complexity of the situations about which questions are asked and of the materials necessary to correct answers, rising steadily in the complexity and abstraction of the subjects considered."

The words "Character," "conduct," "behavior," "attitude" and "emotions" do not appear in Beard's index. His discussion of character and the process of character building are limited to a few sentences in the closing pages of his 117-page "Charter." These two reports financed by large foundations seem to represent the point of view of orthodox leadership of our higher educational institutions.

Is it proper for me to ask: Have not educators tended to define the job of the schools in terms of developing tool skills, and of mastering narrowly defined content? Have they not placed unduly exclusive emphasis upon "sharpening the minds" of those who are to be the lawyers and the executives of the future, as well as the minds of the average run of us who pass through the school system?

Has not the habit of appraising the results of schools in terms exclusively of intellectual achievement and manual skill,

tended to produce a citizenry with sharpened wits and skilled craftsmanship, rather than a realizing sense of social obligation and good citizenship?

Has not our attention been too sharply focused on the universal mastery of scientific method, to the exclusion of the personal and social needs of the masses of our children?

Let me turn from this questioning process a moment to say this: Sometimes the scientist becomes so engrossed in what he sees in the microscope that he fails to lift his eye from the instrument to gaze upon the wide world about him.

I have asked what I intended to be pointed questions regarding problems which to me as a layman are not being solved by the intelligentsia—and I use that word with entire respect. Have not teachers and teachers' colleges, in their zeal for a predetermined curriculum and for a universal intellectual discipline, forgotten that their objective is good citizens rather than subject matter conformity? In all candor, I believe they are shooting over the target.

We must take society as it is. Our program of education must be suited to the requirements and capabilities of each boy and girl according to individual need. In view of this self-evident truth, it may be fortunate that the many and no doubt brilliant suggestions of educational literature have met no more than languid and ephemeral acceptance. Far be it from me to criticize, but in humility of spirit I contend that there is something in education more vital than sharpening the mind.

Undoubtedly many ideas in education now considered too advanced will find a place in the practice of the schools of the future. It is to be expected that there should exist some lag between the time of general acceptance of a policy, program or principle and its complete incorporation into practice.

Even though the program I present today may be approved by you, it will take time to appraise its value. But certainly as regards past objectives, has there not been an excessive lag in the field of education? Even though this exists in public education, it is also true in home training, in parent education, in the efforts of the church, and in the work of character building agencies. But these last institutions are outside your field.

Certainly your desire is to define the objectives of teaching and of the total school experience and to realize them as soon as possible.

I want to refer next to the 1932 Bulletin No. 17, Monograph No. 13 of the U. S. Department of the Interior, Bureau of Education, entitled "Provisions for Individual Differences, Marking and Promotion." This monograph reports a study covering the efforts of the secondary schools to break away from traditional practices and to adjust their programs to individual needs. This report appears to indicate that there is a tremendous desire to do something about the problem of the differences in individuals. But in this report I have found grounds to warrant several questions: Have not the standardizing agencies of the past, the rigid requirements for college entrance, and the prescriptive curriculum made well nigh impossible real progress in meeting the variable needs of the masses of our students? Have the schools and teacher training institutions made adequate provisions for ascertaining the abilities and needs of pupils as individuals? Has any school or teachers' college carried out the logical implications of Professor Morrison's justly famous statement to the effect that teachers should spend half their time studying their pupils as growing individuals and the rest of their time doing what that study shows to be desirable and necessary?

My attention was recently called to an interesting innovation made by Superintendent Herbert S. Weet and inaugurated just before his retirement from the public schools of Rochester, N. Y. Dr. Weet has been active in your body for so many years that I am confident he is known and loved by all of you.

Dr. Weet has provided for two groupings, (*a*) in accordance with individual ability and (*b*) a marking system which undertakes to recognize five major areas of desired results, including character building and habits. I note, however, that in his system, promotion is decided solely on the marks in tool subjects such as spelling, arithmetic, and geography.

I hope no one will read into my remarks the slightest inclination to criticise any teacher, any parent, any social worker or any clergyman for the emphasis placed upon the scientific

method, upon objective thinking, or other methods of procedure. Anything I might say is necessarily no more than the general opinion of a layman anxious to be helpful. My purpose is to stimulate your interest and to cause you to focus your attention upon what I personally regard as important—a restudy of the objectives of education from the viewpoint of the individual child who must live in a complex and changing society.

Perhaps the examples I have given are sufficient preface to a preliminary concrete suggestion dealing with a way in which the public schools can help in a major attack on the prevention of crime. The suggestion calls for a thorough-going application of a particular one of the many generally accepted proposals, with which you are familiar, a proposal which because of the lag I have mentioned has not yet been adopted into universal practice.

Nearly ten years ago Dr. Ben D. Wood, of Columbia University, proposed the adoption of a continuous record card for general use in the public school system. The plan for a continuous record has been promoted by various agencies, including the American Council on Education. Many individuals have urged its adoption.

Professor Wood early proposed that the school record should include not only the class room grades and objective measures which are useful in long-term intellectual guidance, but also a behavior record, so designed as to disclose the blossoming character and personal and social development of the child. Such a behavior record has been demonstrated and, as I view it, greatly improved in the practice of the Rochester Athaenaeum and Mechanics Institute.

If the system is used, as I believe it should be in every community, the public schools will have placed every child under continuous constructive observation. The child who shows anti-social tendencies may then be given special attention and such treatment as the individual case requires. Under this system, prevention of crime can be undertaken in time to produce results. You can readily imagine the far-reaching effects if the character building agencies of the community collaborate

energetically with the schools in helping suspected pre-delinquents to achieve normal adjustment.

Of course, it is not enough merely to start upon another campaign of record making. Attics and basements are filled with "reports" and material which its fond authors thought to be of such importance that it might sometime be studied, formulated and made of practical use. Holding the same idea, the United States Government is erecting what is called the "Archives Building." It occupies an entire square on Pennsylvania Avenue in Washington. This is to be used to store papers, some of them valuable, no doubt, but many of them worthless trash.

If the behavior reports were to be filed in cabinets somewhere, in order that a statistically inclined person might use them sometime, I should not be interested. Such reports are invaluable provided their significance is recognized and their potentialities are wisely exploited. But the realization of these potentialities in terms of better individual school adjustments and more effective citizenship depends upon a re-orientation of our whole teaching and administrative personnel regarding the place of guidance, personal adjustment and character building in relation to the curriculum and the traditional procedures and attitudes which it has engendered and perpetuated.

It ought to be clear that if a pupil in the schools manifests habits of thought or tendencies which are or may become anti-social in their nature, there should be instituted at once an inquiry to determine what is wrong, and appropriate corrective measures should be taken without the traditional subservience to the formal integrity of the curriculum. To this end, there must be set up in connection with every school system a means of immediate treatment of the child who appears to need it. Surely in every community there are enough general medical practitioners, dentists, psychiatrists, specialists and surgeons, also trained psychologists and social workers, who will gladly examine the child and give the school authorities the needed help to determine a course of action.

The thought I have in mind is that the behavior record will

carry a warning that there is danger along the path of progress of this particular pupil. It may be a red light, indicating the necessity to "stop, look and listen." If it serves to attract attention to the need for special treatment and if, as a result of collaboration with these scientific consultants, the child is returned to mental and physical health, our first purpose has been accomplished.

In urging the importance of the social, personal and moral influences of the schools, I do not mean to minimize the intellectual influences and scientific disciplines. These are now and, I hope, will ever be important in our schools. What I here suggest is that our pursuit of intellectual discipline shall not be so exclusive as to leave character building to chance, nor so indiscriminating with regard to individual limitations and needs as to provoke or perpetuate negative reactions and anti-social attitudes in some of our children. Let us not forget that while appropriate intellectual training may go far toward correcting anti-social attitudes, it is also true that inappropriate or wrongly motivated learning efforts may produce opposite results.

The testimony of several leading educators at the sub-committee hearings indicates that unconstructive attitudes and the formation of anti-social groups among school children frequently originate in, or are perpetuated and aggravated by academic maladjustments. Hence the importance of maintaining continuous records both of growth in academic and intellectual achievements and of extra-curricular experiences, personal and social adjustments, and character development.

The reports of all school systems that have come to my notice reveal an appallingly large number of academic "failures" in every grade year after year. Authentic testimony indicates that many if not most pre-delinquents are found in these "failing" groups. Are these failures inevitable or are they due largely to the fact that our curriculum is still so rigid that many of our pupils are confronted with academic tasks which are beyond their abilities, irrelevant to their interests and needs, and which foredoom them to what our inflexible academic standards call "failure"? It seems to me, as an inter-

ested layman deeply sympathetic with teachers in dealing with their complex problems, that the type of intellectual and behavior record here proposed, which centers attention upon the pupil as a growing entity, cannot fail to increase their success in dealing with problem cases of all types.

But important as the use of the behavior record will be with the problem child, its use is vastly more important with all the rest of the pupils. My good friend, Dr. Eugene A. Colligan, President of Hunter College, has supplied me with an excellent manuscript relating to teacher guidance in conducting character education in the public school system of New York. These guides suggest a thoroughly sound program of day to day instruction.

In taking over the guidance of a new pupil, however, the teacher is at great disadvantage without a history of the child's behavior in the earlier grades. As I view the problem, behavior records promise to do for the practice of the teacher in the field of character building what records have done for the doctor in his practice. Except in case of emergency, no surgeon would think of operating unless he had studied the case records of the patient. The reports of what the attending physicians have found in the past will help the surgeon to do a good job and perhaps be the determining factor as to what shall be undertaken.

These references to the behavior record system pave the way for another question:

Is it possible to do vastly better in character building than we are now doing?

If you answer in the affirmative, there remains the question as to how we shall break through the restraints that have stood in the way of progress in this field. How must we go about our task if we are to make full use of the available knowledge and experience at our command?

As a first movement in a major attack, let us secure from the public a new mandate. Let us have new specifications of the results expected from public education or a restatement of objectives. I believe that in drawing these specifications there must be written in large letters certain primary conditions.

We expect results in character and in everything that is essential to good citizenship, rather than results measured chiefly in terms of facts learned, or in terms of pure intellectual activity, or sharpened minds. If you agree with me, I am prepared to join with you in an effort to win general acceptance of a public policy re-defined in such terms as I have stated.

The National Government may assemble facts which will be helpful in the formulation of a general policy in education. Let it be borne in mind, however, that the States never delegated to the Federal Government any legislative or administrative authority in the field of education. Under our Constitution, the acceptance of a new policy and of action under such a policy must be left to voluntary cooperation.

In order to have an agency to coordinate such volunteer efforts and to assist in the work of our Senate Sub-Committee on Crime, we have formed an advisory body known as the Education and Law Conference. The plan of organization of the Conference assumes that its members will all be voluntary, non-official, unpaid workers.

We are in process of organizing an advisory committee and several technical committees. Through these we hope to carry on the work of the conference. The members of these technical committees will be selected from experts known to be free to actively participate in the work of the conference. For example: Professor Ben D. Wood has accepted the chairmanship of our committee on records and Professor W. W. Charters the chairmanship of our committee on instructional materials. Other committees will be organized as the plan proceeds.

If we agree upon the wisdom of such an organization, we need to consider a second step. Sane practical measures must be taken to develop in practice a full expression of a new American policy in education. Such measures should be evolved as will not interfere with present-day essential educational practice and without reduction in efficiency in providing the pupils with the tools of literacy. It is particularly important in these days of economic stress, too, not to increase unduly the cost of the schools. But the desired results cannot be at-

tained unless the plan is so stated as to catch the imagination of every community and command its respect and voluntary cooperation.

To make a clinical test, to use the words of my profession, and to demonstrate the type of development proposed, Dr. Ballou, Superintendent of the Washington schools, is arranging to initiate the proposed plan in the District of Columbia. This will involve evolution in many areas. You can see that he must face problems in administration, records, individual instruction, materials of instruction, training teachers in service, adult classes, and evening classes. In community contacts there will be a new relationship to the movies, the press, the facilities for recreation, the Church, the Juvenile Courts, children organizations, and many more.

In the furtherance of Dr. Ballou's development, the American Council on Education and the Education and Law Conference have set up a joint committee for the coordination of community effort in making this development a success. Under this arrangement the technical committees of the Education and Law Conference serve in an advisory capacity only. The local joint committee functioning as a Committee of the American Council has assumed the responsibility for all operating activities.

I have given you the details of this set-up because I want you to see how we are proposing to face, not only the local conditions, but the deep-rooted traditions of States Rights and local autonomy. The most that may be claimed for the Federal Government in such a matter is that it is the function of the Congress to do what it can for the people under the General Welfare Clause of our Constitution.

Our experience with Prohibition has reminded us that it is dangerous to attempt to modify the practices of our people in major activities through Constitutional Amendment and Federal legislation. Just as the operation of bringing about temperance in America rests upon the educational agencies of our country, so the building of character and good citizenship is more dependent upon volunteer cooperation than upon laws.

It has seemed necessary for the success of Dr. Ballou's project to seek general public approval of his plan and also the approval and cooperation of the colleges and universities in the District, the churches, the so-called character building agencies, the welfare agencies and all the rest of the agencies which you know from experience effect operations of the public school system. I hope the procedure proposed for the District of Columbia will be followed in each state. A NEW DEAL in education must grow from the seeds of progressive ideals and ideas which have been so generally planted locally by you and other leaders in the past.

The agencies of informal education must have a large place in any consideration of this subject. For example, the newspapers, motion pictures and the radio make a daily impression on the majority of our people. That the combined influence of these agencies is growing more constructive requires only a comparison of the releases of a decade ago with those of the present. Here, as in other areas of education, the path of progress is through cooperative study and action, and I hope these agencies will join in using for this purpose the Education and Law Conference.

Because I place such complete dependence upon voluntary cooperation, I have concluded there is needed only one general legislative enactment by the Congress. In consequence, I have introduced in the Senate a Bill which is intended to serve two purposes:

First, it is intended to establish a privilege status in the Federal courts for teachers and their behavior records of the American Council type—records which I hope will eventually be established for every child of school age in this land.

And second, I hope this bill will establish, so far as the Federal Government is concerned, the professional status of the teacher as parallel with and comparable in its dignity and authority to that of the doctor and clergyman.

If this proposed act meets with your approval, I trust you will join the movement to see that it is also written into the statutes of the forty-eight States. Support of such legislation

assumes that you are ready to support my major thesis, which is that we must re-define the desired objectives of education for our children as individuals in society.

If you support this thesis, I repeat:

We must secure, from the public, support for a restatement of what should be the American policy as to the desired results of education in terms of character and citizenship as well as content. We must secure from higher educational institutions an emancipation from the requirements for college entrance insofar as they in fact interfere with the legitimate efforts to achieve results in terms of a newly defined public policy. If this policy is adopted, the colleges themselves may well go through a period of soul searching as to the possibility of their own need of readjusting their practices.

To these ends I bespeak your voluntary cooperation, both in the general support of the Education and Law Conference and in the work of its Education Committees, in fostering joint projects initiated in the spirit of the proposed District of Columbia project. If by this means we can make a successful attack upon juvenile delinquence, the next generation will bless us for our efforts. If we succeed in deepening the public spirit of our students and developing that high sense of trusteeship which will stand the test during the competitive actions of later life, we shall have saved the National from a repetition of the alarming disclosures of vicious conduct in high places. We shall have had a large part, too, in giving to America the leading place in moral as well as technical education.

ROYAL S. COPELAND,
U. S. Senate.

Citizens' Councils in Alabama

THE utter breakdown of Alabama's educational system, with a consequent appeal for Federal aid, has focused upon this state the attention of the entire nation. Some comment has been of a sympathetic character, but much has been critical. Favorable comment urges Federal aid to equalize educational opportunity among the states. It also takes into account losses in school revenue for which the depression is responsible. Critics of Alabama's plight almost invariably couple their remarks with suggestions of state and local government reform.

Hearst papers, commenting editorially in January, bluntly but discerningly asserted that all of Alabama's 600,000 school children could be kept in school and many other children getting free schooling

"if county and local politicians who dominate the legislature would permit the reorganization of county and local government which had been recommended by a commission appointed by the governor in 1931. The Federal Government could render its best service by notifying Alabama's governor and legislature that until the abolition of 'ox-cart' government had been effected, federal aid would be futile and not available."

The *Baltimore Sun* more recently asserts that it is a misnomer to call federal appropriations to certain states

"assistance to education when in reality it should be called assistance to job-holders. . . . Consider for example the State of Alabama, where the schools are in a bad way. Alabama retains on the public payroll a horde of county and municipal officers who are perfectly useless, but who eat up enough taxes to make a vast difference in the financial condition of the state. Why should Maryland have to pay for maintaining schools in Alabama now that the state is broke? That isn't assistance to education. It is assistance to sloth and stupidity."

"W. M. H." in the March 1 issue of the *Literary Digest* suggests that an ideal solution of the educational problem in Ala-

bama and other states would be that "eloquently advocated by President Roosevelt—the lightening of the tremendous burden of local government expenditures by reorganization and consolidation of overlapping jurisdictions."

Although Alabama may not relish these pointed criticisms, it is widely admitted that they contain much truth. The people of this state are not averse to efficiency and economy in government. Unfortunately, too few know what constitutes good government. When aware that mechanisms and methods long since outworn in their usefulness are being supported, Alabamians will demand governments of a modern stamp, which are conducted like any other successful business and which give more and better services for less money.

Steps are being taken which within a few years will bring substantial relief from many of the state's education and government ills. A state Citizens' Council on Good Government has been organized for the purpose of assembling and disseminating facts about government to the people through forty-eight citizens' councils, cooperating civic groups, and through the press. Candidates for state and county offices are advocating general and specific reforms. The state press daily carries articles stressing the desirability of changes of one kind or another. Poll-tax payments this year have made an all-time record, reflecting an increased popular interest in the affairs of government.

Need for remedial measures are evidenced from many angles. Our machinery of local government varies little from that provided by the territorial legislature, and continued in 1819 when Alabama became a state. Although the Brookings Institution has made an extensive survey of Alabama's state and local government, two subsequent special sessions of the legislature have accomplished little in line with its recommendations with the exception of the enactment of a budget control law.

Since 1929-30 Alabama has fared worse than any other state in reduction of school support from public moneys. Reduction in state support for 1932-33 resulted chiefly from decreases in state appropriations, from depletion in state and

county taxes caused by tax delinquency and lowering of property assessments, from diversion of current revenues to payment on a large floating indebtedness, and from losses in funds due to an unfortunate opinion of the attorney general which affected the operation of the budget control act and relegated education to a secondary position among state funds.

Many rural schools did not reopen for lack of funds after the Christmas holidays in 1932-33. A report of the Research Division of the National Education Association issued in May, 1933, estimated that in Alabama schools were closed to 66,955 children by February 28. This number represented more than 60 per cent of the children in all the closed schools of the country. By March 30, schools containing 81 per cent of the rural school children were closed in fifty Alabama counties. Institutions of higher learning kept going largely by stopping capital expenditures entirely, by decreasing faculties and reducing salaries, and by seriously curtailing research.

To aid in the distressing school situation, the Congress of Parents and Teachers, through its Committee on Legislation and Citizenship in April and May of 1933, sponsored the organization of county citizens' councils. "Schools must open and be state-supported a full term," declared the call for action sent out to all organizations inviting them to send representatives to local citizens' councils. "Plans for the future must make it certain that such a condition as now exists will not be possible again. . . . Our schools must operate. Alabama must pay its debts." The state was divided into ten districts and active P.T.A. workers as district directors appointed to organize the counties. In each county a chairman, secretary-treasurer and a publicity agent were appointed from representatives of the several civic clubs. It was the duty of this Committee then to organize every community within the county. In this manner, citizens' councils were set up in forty-three of Alabama's sixty-seven counties before the end of May.

The most important accomplishment of Alabama's Citizens' Council as then organized was the aid given in the campaign last June and July for the passage of the warrant and income tax amendments. It was the purpose of these amendments

to liquidate the state's floating indebtedness and thereby free the schools of a heavy burden of debt. Eight months before, an income tax amendment had been defeated by a two to one majority, forty-two counties voting against the amendment, and a bond issue for paying off the indebtedness lost by an even greater majority. A powerful and well-organized opposition sought especially to defeat the income tax, and it was evident that the odds were in their favor. The most intensive campaign that had been waged in Alabama for many years culminated in July in an overwhelming victory for the amendments. The opposition carried only five counties; the vote on the income tax was 107,202 for and 69,889 against. With a huge unfunded debt out of the way, the schools were placed in a more satisfactory financial position.

A well-directed speakers' campaign headed by the Governor helped to swing the vote in favor of the amendments. However, citizens' councils deserve a fair share of the credit for bringing about such a remarkable reversal of public sentiment. In forty-three counties they conducted house-to-house canvasses in hundreds of communities and provided speakers for meetings in all sections of the several counties. Letters were written to public spirited leaders throughout the state. Posters and handbills sent out from P.T.A. headquarters were distributed by local workers. A continuous barrage of news articles was furnished to the press. These articles portrayed the condition of the schools, counteracted misinformation, pointed out the advantages of the income tax and the need of such a tax to aid in liquidating the state's debt, and urged that the state should pay its honest debts to the teachers and other creditors.

Though organized for the purpose of helping the schools, the adaptability of citizens' councils for study of other governmental problems was widely appreciated. Friends of education were agreed that the permanent welfare of the schools is directly dependent upon a government properly balanced in all phases. This relationship has been well expressed by Mrs. Hugh Bradford, president of the National Congress of Parents and Teachers, in her statement that "our recent situa-

tions have convinced us that home and school education as well as community protection is dependent upon the efficient administration of financial affairs within the various national, state and local groups. A study of these situations is essential to future development and without such studies there can be no basis for an approach toward securing better schools."

The need of a clearing committee to coordinate the efforts of the several citizens' councils and civic and professional organizations interested in governmental services was also apparent. The State Kiwanis organization at its October meeting passed resolutions urging the organization of such a clearing committee to function primarily in the interest of education. Almost simultaneously under the leadership of the Congress of Parents and Teachers representatives of the state-wide civic and professional clubs were invited to Montgomery to consider plans for organizing a state citizens' council. On November 7, the Alabama Citizens' Council on Good Government was definitely launched. The twenty organizations represented on the Council are the Federation of Women's Clubs, Congress of Parents and Teachers, American Legion Auxiliary, Council of Home Demonstration Clubs, Business and Professional Women, Association of University Women, United Daughters of the Confederacy, Daughters of the American Revolution, the Alabama Farm Bureau Federation, Alabama Federation of Labor, Kiwanis, Lions, Civitans, The Alabama Education Association, State Board of Education, Association of School Superintendents, Ministerial Association of Montgomery, Alabama Bankers Association, Alabama Medical Association, and the Alabama Dental Association.

It was agreed that the organization should be entirely non-political and non-partisan in character and that its activities would be of a purely educational nature. To assure immunity from politics, the rules of procedure provide that no state or county official or candidate for office will be admitted to membership. It will seek, however, to cooperate with public officials in every way. The council assumes that officers of government are public-spirited and are interested in en-

couraging any movement which will enable them to render greater service to the public.

The council proposed to study such pressing state problems as the health department, which has been "virtually annihilated," the need for properly balanced economy in the state, county, and city governments, the school situation which threatens the state with less than a normal term, and the necessity of encouraging all voters to pay their poll taxes. The Council conducted an intensive "Pay Your Taxes Campaign" in November and December, but, on account of its vital bearing on all public services, the reorganization of county and municipal government has been chosen as the principal immediate objective.

A steering or executive committee of seven members was named to formulate policies and to direct the activities of the council. A field or extension committee was assigned the duty of meeting with citizens' councils and of organizing new councils with the ultimate aim of having facts about government carried to the people in every community. Facts will be disseminated by a publicity committee through the press and through local citizens' councils and civic clubs. A special committee determines who shall be invited to membership.

The research committee's program for the year involves preparation of a series of instructional studies on county government to be issued monthly. Charts are used to make statistical information more graphic. Functions of county government will be outlined and facts concerning government revenues and expenditures presented. One study will describe how the state has economized thus far—an excellent example of destructive economy. Digests of North Carolina's county manager law, of Virginia's law which permits a county to choose between the manager and executive plans, and of other progressive legislation will be prepared for distribution.

Possibilities for constructive economy will be pointed out, primarily by the use of illustrations from other states. The studies will show how both economy and efficiency may be gained through proper budgeting, centralized purchasing and uniform accounting. The manager plan of city and county

government, civil service, revamping of the state tax system, the necessity of proper arrangements for payment of debts, the combining of county offices, the consolidation of counties and of functions of groups of counties, and similar topics will be given full consideration. Through the National Committee on Citizens' Councils the Alabama Council will bring to the attention of Alabamians united experiences of hundreds of civic bodies throughout the country.

Activities of the Council are financed primarily by voluntary contributions of individuals and cooperating organizations. However, aid has been secured from other sources. Through the Civil Works service two clerical workers have been provided. The TVA-CWA Collection of Basic Data project has approved the research committee's project on collection of local government data and has allotted six workers until May 1, therefor. These workers will visit twenty or more counties to get statistics and pertinent facts on revenues, expenditures, and other phases of county and municipal administration. Data on counties and cities not visited directly will be secured from state records and from the several county offices through questionnaires. With definite facts and figures available, the interest of citizens of a particular county may be more readily aroused.

The Alabama Council has undertaken to secure the approval of a federal project on the collection of basic data on local government in all the states. The project has been indorsed by a number of national organizations. However, in view of the short time remaining for the Civil Works Administration it has not been possible to launch such a comprehensive program at this time. Should it prove necessary to revive the Civil Works organization next winter, perhaps this project will be included. Undoubtedly facts would be gathered which could serve as a basis for remedial legislation which would save millions of dollars and provide more efficient and economical local government in all the states.

Through its program of assembling facts and disseminating them through the press and groups of representative citizens in every community, leaders in the movement for reform in

Alabama are confident that much can be done in arousing public interest and crystallizing sentiment in favor of reform before the 1935 legislature convenes. Alabama's state and county governments have no funds in excess of demands for essential services to be expended on antiquated machineries of government or on the waste and inefficiency fostered by them. The Alabama Citizens' Council on Good Government believes that through the citizens' councils idea the state is offered a most satisfactory and certain method for securing greater simplicity, economy and efficiency in our government and assuring the preservation of the essential public services.

CHARLES W. EDWARDS,
Alabama Polytechnic Institute.

A Laboratory of Public Affairs

THE Third Decade of the Twentieth Century has been witnessing a long-awaited breaking of the vicious circle that placed political and governmental service largely apart from the active interest of our better trained young people.

Like a snowball rolling downhill, that vicious circle increased its grasp upon the imagination of young Americans. Because of the unfavorable attitude toward politics, more and more of our young people turned their eyes from public affairs as a life interest and entered other fields, usually business. The unfavorable attitude was thereby intensified; more of our promising young men avoided public affairs; and so tightened the circle.

Depression and the closer relationship between government and business have changed that situation. Capping a fitting climax to the end of the post-war cynicism which engulfed our young people, an awakened interest in more worthwhile pursuits has aroused the youth of America to break the circle.

The broken tradition now watches the entrance into public service of those who but a few years ago would have scorned the idea. Debate may wax long and hot as to just what has been the main factor in the realization of this change—whether it is to be found in an altruistic turn of mind toward public service, or whether it lies in the fact that opportunities in fields of business have been materially reduced, with the result that governmental service has become more attractive.

The truth remains, however, that well-manned government is vitally necessary to our economic well-being. An increased relationship between governmental authority and our business and financial activities requires that public service must be efficient, enlightened and on a high plane of purpose and interest.

One question is reaching an answer, but is the problem solved? Are those young people with all their college training equipped for public and governmental service?

The answer, it is maintained, may be indicated in the statement recently made by Dean Arthur Cutts Willard upon his assumption of the presidency of the University of Illinois. President Willard said, "The average college graduate has been prepared for everything but life." Those college-trained people, who have perhaps followed rather intense studies of political and economic theory and history, have on the whole entered public service with but a scanty knowledge of the actual workings of government and political forces. That lack has been a fundamental weakness, and the importance of remedying it has been recognized.

To provide an opportunity for that most necessary training in the practical operations of the government, the National Institution of Public Affairs is now being established in Washington. Starting early in 1935 the Institution plans to bring a selective group of college juniors, seniors and young graduates to Washington for a practical, constructive and inspiring training for service and leadership in public affairs.

Self-governing, privately financed, non-partisan and non-political, but enjoying the cooperation of the National Administration, this "laboratory of public affairs" will appoint its students upon a plan similar to the selection of Rhodes Scholars.

Designed not to compete with existing educational facilities but to augment theoretical and classroom study of politics and government, the National Institution will afford a knowledge and a training in the practical functions, organizations, procedure and methods of the Federal Government.

Included in the Institution's laboratory program will be lectures by governmental officials; forums for discussion, debate and analysis; observation of and assignment to actual government work and duties; special case problem work; and the writing of a report or thesis.

In the students' application to actual governmental work, which will come as the last part of the program of study, it is planned that each student will be assigned as an "interne" to some branch of the government, probably the one that interests him most. For a period of several days, he will get this

actual experience, coming to work and continuing through the day as if he were permanently employed. His assignment would be as an assistant to an official in the higher brackets of governmental positions.

At the conclusion of that assignment of study the student will devote his last week of the Washington program to a special governmental problem, function or department.

To guide the student properly in this work, an official will serve as an advisor or tutor cooperating with the Educational Director of the Institution to make this special work of the student constructive, logical and worthwhile. The student's report or thesis, which is to be made for the double benefit of the Institution and the student's own college, may be on this special case problem, that entire training program, or any phase of the program he may wish to select with the advice of his government advisor and the Educational Director. Fortunately there are outstanding men in the various units of the government who have had a combination of academic background and practical experience in government and who will thereby be well qualified to serve as student advisors for the National Institution of Public Affairs.

Picture if you will the actual operation of the Institution's program in Washington. After introductory lectures covering the entire field of the Federal Government operations, the students will follow through a program that will include all of the major governmental units, functions and fields of activity. The subjects of study will include not only the legislative, judicial and executive departments, in addition to the emergency recovery agencies, but will also cover affiliated activities such as the operations of the Pan American Union and the foreign Diplomatic Corps.

Take as an example the study of the Department of Commerce. The program's consideration of that department's work will be inaugurated by a lecture in which the Secretary of Commerce will set forth the functions of his department and the niche it occupies in the whole field of government. Immediately following his talk, the cabinet member would answer questions in an open forum on his particular department of activity.

After other lectures by heads of the subordinate units within the particular department, also to be followed by open forums, the Institution's students will make a study or analysis of the entire department's functions and methods. In this study the student will not only observe the actual workings of the various bureaus within the department, but will also analyze the particular functions both in their individual aspects and as to their respective relationship to the whole field.

To wind up the students' consideration of each governmental unit and activity, the Institution will conduct discussion groups to coordinate the fields of study and to bring out approaches to the particular function or activity which may not have been considered by the governmental officials. These discussion groups are to be led by a group of political science professors who shall be brought to Washington on leave of absence from their colleges for the period of the Washington program of study.

Basic qualifications which students must have for selection by the Institution's committees will include, in addition to a strong scholastic standing and an active interest in the fields of politics and government, those qualities of character and ability which are so important to that elusive characteristic which we term the dynamics of leadership.

The process of developing a few great leaders from a population of one hundred and twenty-five million people is difficult and complex. It is very similar in principle to the process of extracting radium from ores. Miners and refiners are extraordinarily lucky if they get as much as one-twenty-eighth of an ounce of radium from ten tons of carnotite or pitchblende, radium-containing ores. And then it is a process of refining the ores over and over again. Leadership is just as rare in the realm of human affairs as radium is in the realm of minerals. The National Institution of Public Affairs will provide, I believe, the ore from which we shall draw in the future many of our competent and inspired leaders.

Within a period of four years, between six and seven hundred young people would attend this university of public affairs. Each of these students would thus become a potential

leader for the years ahead. Through such an intimate contact with our Federal Government, such a careful and comprehensive study of its functions, such a careful weighing of men and mechanisms, these young people would return to their respective homes with a vision of statesmanship and leadership which they could attain in no other way. Those who have within them the spark of inspiration for high achievement in public affairs would, through a laboratory or organization of this kind, find the fuel to feed that spark until it became a blazing fire of leadership.

But it is not alone in this specific training of a limited number of students that the great value of the National Institution of Public Affairs lies. It is also in the re-shaping and re-direction of our channels of thinking and methods of educational training for public service that the Institution will make a signal contribution. This laboratory doubtless constitutes the first step in a constantly expanding program for a planned and objective development of leadership on a much broader scale, which would be the best insurance possible for the perpetuation of our democratic form of government. Such a program would fulfill in every sense the highest responsibilities and functions of democracy.

The Washington program of the National Institution, restricted as it will be to a comparatively small number of students each year, will not directly affect large numbers of American college students. In a supplementary activity, however, the National Institution is stimulating the development of "Public Affairs Forums" at each of the 600 colleges and universities throughout the country.

As well as it is possible at a distance from the seat of government, these forums will study the practical operation of the Government and concrete aspects of public affairs, and members will be encouraged to engage in the campaigns of their own political parties. These campus clearing houses of practical public affairs will thus serve as preparation both for a tour of study in Washington and for a later interest and activity in politics and government.

The agenda of these forums will not be confined to the Fed-

eral Government and national affairs, but will also include the consideration of current problems and a study and active participation in the local government and politics as evidenced in the communities close to the colleges and the universities.

The National Institution of Public Affairs constitutes the first fundamental step in a conscious, objective program for the training of public leaders to replace the hit-and-miss haphazard methods which have prevailed in the past.

To the extent to which this program develops and is supported will depend largely the maintenance and future stability of our form of government. For, if a democratic form of government such as ours does not provide a direct objective method for developing leadership in the ranks of the nation's youth to keep pace with the increasing demands for leaders brought about by a social and economic system growing more sensitive, intricate and complex each year, then that form of government is doomed.

Through its program the National Institution not only hopes to augment theoretical and classroom study of politics and government by a knowledge and training in the practical operation of government; it also looks to the development of a new and most necessary tradition which will attract to public affairs the well trained young people of high character and ability who are becoming increasingly vital to those growing complexities of governmental activities. Upon the development of that program and that tradition depends the future well-being of our country, economically and socially.

OTIS T. WINGO JR.,

*National Institution of Public Affairs,
Washington, D. C.*

Special Meeting

of the American Council on Education

February 10, 1934

Washington, D. C.

A SPECIAL meeting of the American Council on Education was held on Saturday, February 10, 1934, at 10 a.m., in the Lounge of the Brookings Institution, 722 Jackson Place, Washington, D. C. The following official delegates and members of the Council were present:

CONSTITUENT MEMBERS

| <i>Association</i> | <i>Delegate</i> |
|-------------------------------------------------------------|--------------------|
| American Association of Colleges of Pharmacy | R. A. Lyman |
| American Association of Junior Colleges | W. C. Eells |
| American Association of Teachers Colleges | N. W. Cameron |
| | R. M. Steele |
| | Lida Lee Tall |
| American Association of University Professors | H. G. Doyle |
| | H. W. Tyler |
| American Association of University Women | Kathryn McHale |
| American Library Association | G. F. Bowerman |
| | J. L. Wheeler |
| Association of American Colleges | S. P. Capen |
| | H. M. Wriston |
| Association of Land Grant Colleges | R. M. Hughes |
| Association of Urban Universities | C. S. Marsh |
| Institute of International Education | E. R. Murrow |
| | William F. Russell |
| Middle States Association of Colleges and Secondary Schools | H. G. Doyle |
| | J. H. Tyson |
| National Association of State Universities | A. H. Upham |
| National Catholic Educational Association | J. E. Cummings |
| | J. E. Lishka |
| National Educational Association | Florence Bamberger |
| | J. H. Saunders |
| | George D. Strayer |

| | |
|-------------------------------------------------------------|----------------|
| North Central Association of Colleges and Secondary Schools | F. J. Kelly |
| Progressive Education Association | George F. Zook |
| | A. Shumaker |
| | Laura Zirbes |
| Society for the Promotion of Engineering Education | F. L. Bishop |
| | L. W. Wallace |
| Southern Association of Colleges and Secondary Schools | K. J. Hoke |
| | Guy Snavelly |

ASSOCIATE MEMBERS

| | |
|-----------------------------------------------------|-----------------|
| American Association for the Advancement of Science | Henry B. Ward |
| Modern Language Association | H. C. Lancaster |
| National Association of Deans of Women | V. G. Barrows |
| National Council of Teachers of English | C. C. Fries |
| National Vocational Guidance Association | L. J. O'Rourke |

*Institutional Members**Delegate*

| | |
|---------------------------------------|----------------------|
| American University | G. B. Woods |
| Birmingham-Southern College | Guy E. Snavelly * |
| Boston University | D. L. Marsh |
| College of the City of New York | F. B. Robinson |
| College of William and Mary | K. J. Hoke * |
| Drexel Institute | P. R. Kolbe |
| Fordham University | C. J. Deane |
| Georgetown University | G. F. Strohaver |
| | W. M. Cogan |
| | Wm. H. Mcgehee |
| George Washington University | C. H. Marvin |
| Grinnell College | G. F. Authier |
| Hood College | G. R. Rebert |
| Howard University | C. H. Thompson |
| Iowa State College | R. M. Hughes * |
| Lawrence College | H. M. Wriston * |
| Massachusetts Institute of Technology | H. W. Tyler * |
| Rosemont College | Mother M. Cleophas |
| | Mother M. Chrysostom |
| Rose Polytechnic Institute | J. H. MacCracken |
| Russell Sage College | J. L. Meader |
| Rutgers University | C. E. Partch |
| Saint Louis University | J. B. Macelwane |
| Sarah Lawrence College | Constance Warren |
| Stanford University | W. C. Eells * |
| Temple University | J. H. Dunham |
| University of Akron | H. E. Simmons |

University of Buffalo
University of Chicago
University of Michigan
University of Rochester
Villanova College
Washington and Jefferson College
Wellesley College

S. P. Capen *
John D. Russell
C. S. Yoakum
E. B. Taylor
E. V. Stanford
R. C. Hutchison
M. D. Russell

* Also represented a constituent member.

The Chairman of the Council, Dean William F. Russell, Teachers College, Columbia University, presided. In the absence of the Secretary, Dr. Ralph Cooper Hutchison, President of Washington and Jefferson College, was elected Secretary pro tem.

Dean Russell stated that the meeting had been called to consider two amendments to the Constitution proposed by him after consultation with the Executive Committee as follows:

To amend Section Two by striking out the words "the initiation, the promotion and the carrying out through co-operative action of enterprises of fundamental importance for the advancement of American education by means of systematic studies, publications, conferences, and other similar devices. It is understood that such matters will lie mainly in the field of university and college work, and in related educational fields." and substituting the words "to advance American education in any or all of its phases through comprehensive voluntary cooperative action on the part of educational associations, organizations and institutions and in the fulfillment of that purpose to initiate, promote and carry out such systematic studies, cooperative experiments, conferences, and other similar enterprises as may be required for the public welfare and approved by the Council," so that the complete section will read as follows:

2. Object: The general object of the Council and the basis of membership therein shall be to advance American education in any or all of its phases through comprehensive voluntary cooperative action on the part of educational associations, organizations and institutions and in the fulfillment of that purpose to initiate, promote and carry out such systematic

studies, cooperative experiments, conferences, and other similar enterprises as may be required for the public welfare and approved by the Council. The Council was organized to meet national needs in time of war and will always seek to render patriotic service. It will also encourage international cooperation in educational matters.

To amend the third sentence of Section Seven of the present Constitution by striking out the words "at the Annual Meeting from a list to contain at least nine names presented by the Executive Committee," and substituting the words "on nominations presented jointly by the Executive Committee and the Problems and Plans Committee," so that the complete paragraph will read as follows:

7. Problems and Plans Committee: There shall be a Problems and Plans Committee consisting of twelve members, three of whom shall be elected each year for terms of four years. No member may succeed himself directly. Members of this committee shall be elected by the Council on nominations presented jointly by the Executive Committee and the Problems and Plans Committee.

In case of a vacancy on the Problems and Plans Committee, the Executive Committee shall have power to fill the vacancy until the next annual meeting of the Council.

The Problems and Plans Committee shall plan the research activities and other projects of the Council and shall review continually all projects planned by the Committee and undertaken by the Council.

Dean Russell stated that it had been somewhat difficult for him to see why the action of the Council last May could have any serious effect on its future welfare, because, so far as the Problems and Plans Committee was concerned, it

"didn't seem to me to be unwise. It did seem to me that some sort of a rotating membership of that committee would be of value and that it should be more closely knit to the Council. So far as the little phrase that the work should be primarily in the college field is concerned, that didn't seem to be of the utmost importance. However, I found that it was not so considered by other people.

"The thing I did not understand and did not come to understand until late in the fall was that the work of the Problems and Plans Committee and the work of the American Council

had so highly commended itself to certain of the foundations that far from trying to dominate the Council, they were really trying to call upon an organization of the type that they thought the Council wanted to be, to assist them in mapping out researches, investigations and experiments that would affect the welfare of American education as a whole, not for the university alone, not for the college alone, not for the secondary school alone, not for the elementary school alone, not for vocational education alone, nor for the religious school, nor for adult education nor for education for leisure, but for the entire educational system as it tied together from top to bottom.

"As your Chairman, then, watching the financing of the organization, it was plain to me that I was at a crossroad in connection with developing the future of the Council. I had the alternative of developing it primarily in the college field and of using (for the support that I could see for next year was plain enough) the amount that we could bring in in dues from the present organization, which I think will reach the estimate of \$20,000 this year—it is about \$17,000 at this moment—and any other finances that we could secure from extending the influence of the Council, say by bringing in the junior colleges and other organizations and associations. This would mean a large contraction of our budget and would force us to focus it primarily upon the college field as such. Then there was the other possibility of seeking substantial support not only for this aspect of the Council's work but for the aspect of the Council's work as it had been mapped out as a project of the Problems and Plans Committee.

"We have made no diminution in the services to the colleges. I feel that the work that President Marvin's committee did in securing that interpretation for the N.R.A. is well worth the dues that the organizations have put into this organization for years past and will put in for years to come, and that the recent move of Mr. Hopkins, so that it can apply to students who pay tuition, is of the utmost value to the colleges as a whole. Furthermore, the committee on graduate study, under the chairmanship of President Hughes, has made distinct progress during the year.

Since the Council, by its very organization and set-up, combines the interests of the whole of American education in a way that no other organization combines it, it did not seem wise to pass up the opportunity of building that aspect of the Council's work.

"In order to make it plain to possible supporters of the Council that we, as a Council, would desire to do that, three steps were necessary. One was to go on record stating that the Council wanted to serve the whole educational problem from top to bottom. The second was to make it plain that the Problems and Plans Committee would be a committee picked for a particular purpose. That committee must have members who represent certain knowledges and certain areas within the field. We thought that this feature would be well guarded if the Executive Committee, which does represent the will of the Council, would nominate for the Council the members of that committee on the joint recommendation of the Executive Committee and of the Problems and Plans Committee.

"The third thing was the fundamental question of the permanence of the administration of the Council during the period for which we might request funds. Dr. Mann is too rapidly approaching retirement age. There were some proposals in former negotiations regarding the appointment of Dr. Mann as Director Emeritus and the appointment of another Director who would have active service throughout a period for which we might secure support, that were unsatisfactory to me and to Dr. Mann and to others. In the negotiations during the year so far these have been happily adjusted.

"If, then, you will approve the proposals as the Executive Committee has recommended them—and I may say that it is not my idea, this is the result of protracted conferences in the Executive Committee—if you will pass the proposed amendments as they have been outlined, I will then take up with possible supporters the question of securing substantial support for the Council for probably a seven-year period, and if that is secured and if that is agreeable to you I will then direct a part of the administrative development of the Council in that direction.

"On the other hand, if these proposals do not commend themselves to you and you feel that the Council should develop purely as an organization for the serving of the college field and should not embark upon this larger service, then I am perfectly happy to accede to your wishes and to bend all my energies for the balance of my term to directing the Council in that direction. But I did not think it was right for me at this fork in the road to settle the question by myself, and I thought that the Council should decide which way they want to go and then I would follow along.

"I may say that I talked this over with Dr. Mann first, and this fork in the road was definitely clear to both of us. It was he who urged me to proceed in the larger direction rather than in the narrower one."

The Chairman then asked Dr. Mann if he would care to supplement his statement in any way. Dr. Mann said:

"Mr. Chairman, I think that you have made a very straightforward and fair presentation of the case, and I am thoroughly in sympathy with it; in fact, I think it is necessary for the Council to take the larger view because our experience in the past has of necessity carried us into the larger areas of education. We haven't been able to confine our experiments with the testing programs and with the record programs, et cetera, in the colleges. I don't see how a college organization, one that confines its attention entirely to the college field, could be of real service even to the colleges because they depend so much upon what goes on in the elementary school. So that these changes in the Constitution seem to me to recognize formally what has grown to be our practice as a necessity through the past six or eight years.

"I am heartily in sympathy with the other point. As Dean Russell has stated, we propose to change the method of selecting the Problems and Plans Committee merely to insure, that being a highly expert committee, that it is selected more as high experts have to be selected in order to be well balanced.

"I am thoroughly in sympathy with the retirement of the Director. I have felt for several years that I was ready to relinquish some of the active duties that are necessitated in administering the Council, and I am very glad indeed to cooperate with making it possible for the Council to get a director who could be sure of being active for a longer period, provided that I can have the opportunity to continue to work on some of the projects in which I am particularly interested. Those arrangements have been worked out with the Executive Committee in a thoroughly satisfactory way, and therefore I thoroughly endorse Chairman Russell's proposals and believe that his suggestions are the wise policies for the Council to follow."

After further statement by the Chairman, Chancellor Capen of the University of Buffalo moved that the Council adopt the proposed amendment to Section 2. After discussion, in which President J. L. Meader of Russell Sage College, Mr. G. F. Bowerman, representing the American Library Association,

Dr. James B. Macelwane of St. Louis University, Dr. Rufus A. Lyman, representing the American Association of Colleges of Pharmacy, Mr. Joseph H. Saunders, representing the National Education Association, participated, the amendment was unanimously adopted, the delegates of eighteen constituent organizations, or three-fourths of the constituent membership of the Council voting for the amendment as required by the Constitution.

On motion of President Frederick B. Robinson of the College of the City of New York, the amendment of Section 7 as proposed was unanimously adopted without discussion.

On motion of President Robinson the Council adopted as its own the proposals relating to the contingent retirement of the Director as stated in a letter of Chairman Russell addressed to Dr. Mann under date of January 5, 1934, and a letter addressed by Dr. Mann to Chairman Russell, under date of January 13, 1934. The motion was adopted by a unanimous vote and the correspondence ordered spread upon the record.

Under the terms of the arrangement the retirement of the Director will not become effective unless substantial support for the Council for a seven-year period is secured, and the change of administration will be made at this time to permit the Council to enter on a new and long range project of large importance to the general cause of education.

A motion by Dean Doyle of George Washington University that a nominating committee of three to propose to the Council a nominee for the office of Director, should a vacancy occur in that office, be elected by the Council by open nomination from the floor was lost by the adoption of a substitute motion of President Marsh of Boston University constituting the Executive Committee of the Council the Council's committee on nomination for the office of Director.

Chairman Russell announced that he had secured a grant of \$5,000 from the Carnegie Corporation for the general budget of the Council, and recommended that a committee be appointed to study the question of the financial structure behind the educational system of the country both State and national,

in the light of the present emergency, and to serve as a center of information in this field.

On motion of President Snively, the Chairman was authorized to appoint such a committee, and the Carnegie Corporation's special grant of \$5,000 was allocated to the committee's use.

It was agreed that the annual meeting should be held in May, as usual.

Commissioner Zook and Dr. F. J. Kelly addressed the Council on projects now on foot for Federal aid to education, particularly with reference to the authority granted for the use of relief funds for part time employment of college students.

Mr. John H. Tyson of the Upper Darby High School (Pennsylvania) spoke on behalf of the high school students in need of aid in order that they might attend college.

President Wriston discussed the clause requiring 25 per cent of the aid to be reserved for new students, so far as it affects the current semester already started. Miss Bamberger of the National Education Association, Dr. Zirbes representing the Progressive Education Association, and Mr. John H. Tyson of the Middle States Association, participated in the discussion.

Dr. Mann, Chairman Russell, Dean Dunham, Chancellor Capen, joined in a general discussion as to desirable changes in the organization and methods of the Council, Dean Dunham raising the question as to whether the work of the Council might not be organized under the National Research Council or its Division of Educational Relations, and the colleges relieved of the burden of contributing to its support.

The Council adjourned at a quarter of one to lunch together at the Cosmos Club.

The 1933 Psychological Examination

THE 1933 edition is the tenth edition of the American Council on Education Psychological Examination. The number of colleges participating this year has been 399, and they have used 121,757 tests.

This report contains norms for the 1933 edition. Tabulations have been made of the records of 40,229 students in 203 colleges. This represents all reports received by March 10th.

The list of colleges sending in records is given below. The table also shows the number of records reported from each college, and the first quartile, median, and third quartile for the gross scores from each college.

Following the list of colleges are tables giving norms for the five separate tests and for the gross scores. A final table shows the equivalent scores for the 1931, 1932, and 1933 editions.

UNIVERSITIES AND COLLEGES SUBMITTING TEST RECORDS

| | <i>Number of Students</i> | <i>Gross Scores</i> | | |
|------------------------------------------------------|-------------------------------|----------------------|---------------|----------------------|
| | | <i>Q₁</i> | <i>Median</i> | <i>Q₃</i> |
| Adelphi College, Garden City, N. Y... | 108 | 150.00 | 184.61 | 218.33 |
| Akron, University of; Akron, Ohio... | 354 | 124.25 | 163.57 | 201.84 |
| Alabama College, Montevallo, Ala.... | 232 | 85.56 | 122.14 | 164.44 |
| Alabama Polytechnic Institute, Auburn, Ala..... | 411 | 84.04 | 121.25 | 159.71 |
| Albion College, Albion, Mich..... | 183 | 110.47 | 146.33 | 188.25 |
| Alfred University, Alfred, N. Y..... | 183 | 128.64 | 164.50 | 206.50 |
| Allegheny College, Meadville, Pa.... | 176 | 154.17 | 190.00 | 226.43 |
| All Saints' Jr. College, Vicksburg, Miss..... | 13 | | 185.00 | |
| Antioch College, Yellow Springs, Ohio | 128 | 168.33 | 200.00 | 236.67 |
| Arizona State Teachers College, Tempe, Ariz..... | 227 | 88.29 | 125.21 | 166.35 |
| Arkansas State College, Jonesboro, Ark..... | 190 | 92.81 | 128.00 | 171.87 |
| Arkansas State Teachers College, Henderson, Ark..... | 132 | 94.00 | 128.57 | 176.36 |
| Baker University, Baldwin City, Kans. | 94 | 104.37 | 141.11 | 189.00 |

| | <i>Number of Students</i> | <i>Gross Scores</i> <i>Q₁</i> | <i>Median</i> | <i>Q₃</i> |
|--------------------------------------------------------------|-------------------------------|---------------------------------------------|---------------|----------------------|
| Bakersfield Jr. College, Bakersfield, Calif..... | 294 | 107.05 | 149.00 | 192.28 |
| Bates College, Lewiston, Maine..... | 173 | 140.21 | 172.50 | 206.39 |
| Bay City Jr. College, Bay City, Mich. | 133 | 104.46 | 136.43 | 178.44 |
| Baylor University, Waco, Texas..... | 472 | 128.26 | 158.42 | 195.00 |
| Belhaven College, Jackson, Miss..... | 57 | 110.50 | 143.00 | 182.50 |
| Bethany College, Bethany, W. Va.... | 89 | 95.63 | 160.83 | 206.25 |
| Birmingham-Southern College, Bir- mingham, Ala..... | 252 | 91.87 | 131.76 | 178.67 |
| Bishop's University, Lennoxville, Quebec..... | 45 | 173.21 | 198.75 | 229.17 |
| Black Mountain College, Black Moun- tain, N. C..... | 22 | 172.50 | 220.00 | 251.67 |
| Bowdoin College, Brunswick, Maine. | 131 | 148.96 | 193.57 | 244.72 |
| Bradley Polytechnic Institute, Peoria, Ill..... | 210 | 112.92 | 156.25 | 200.56 |
| Briar Cliff College, Sioux City, Iowa.. | 17 | 140.83 | 162.50 | 215.83 |
| Broadview College, La Grange, Ill.... | 124 | 114.00 | 146.00 | 180.00 |
| Brooklyn College, Brooklyn, N. Y.... | 365 | 152.20 | 184.65 | 221.53 |
| Bucknell University, Lewisburg, Pa... | 224 | 135.00 | 174.00 | 219.33 |
| California State Teachers College, Fresno, Calif..... | 351 | 108.48 | 146.33 | 181.35 |
| Carleton College, Northfield, Minn... | 227 | 139.77 | 181.14 | 217.50 |
| Carroll College, Helena, Montana.... | 24 | 125.00 | 147.50 | 230.00 |
| Carroll College, Waukesha, Wis..... | 137 | 131.56 | 170.55 | 214.58 |
| Case School of Applied Science, Cleve- land, Ohio..... | 146 | 164.17 | 205.83 | 236.33 |
| Centenary College, Shreveport, La.... | 206 | 75.36 | 109.44 | 161.67 |
| Central College, Fayette, Mo..... | 192 | 96.66 | 135.22 | 167.69 |
| Central State Teachers College, Mount Pleasant, Mich..... | 230 | 87.00 | 126.47 | 172.50 |
| Central Y. M. C. A. College, Chicago, Ill..... | 1053 | 115.68 | 156.43 | 196.92 |
| Centre College, Danville, Ky..... | 100 | 112.50 | 142.73 | 182.00 |
| Chicago Jr. College, Chicago, Ill..... | 75 | 101.25 | 128.33 | 180.63 |
| Chicago, University of; Chicago, Ill... | 646 | 176.48 | 217.89 | 255.67 |
| Clark University, Worcester, Mass.... | 95 | 156.87 | 189.17 | 234.64 |
| Coe College, Cedar Rapids, Iowa..... | 147 | 118.21 | 151.67 | 192.50 |
| Colby College, Waterville, Maine.... | 150 | 136.54 | 172.50 | 206.82 |
| Colgate University, Hamilton, N. Y.. | 284 | 147.33 | 179.06 | 214.12 |
| Connecticut College for Women, New London, Conn..... | 180 | 153.00 | 186.47 | 211.77 |
| Dartmouth College, Hanover, N. H.... | 668 | 170.45 | 203.67 | 239.51 |
| Delaware, University of; Newark, Del..... | 225 | 123.45 | 158.33 | 196.14 |
| Denver, University of; Denver, Colo. | 439 | 139.90 | 179.48 | 205.60 |

| | <i>Number of Students</i> | <i>Gross Scores Q₁ Median Q₃</i> |
|-----------------------------------------------------------|-------------------------------|------------------------------------------------------------|
| De Pauw University, Green Castle, Ind..... | 353 | 135.78 171.40 212.21 |
| Detroit, College of City of; Detroit, Mich..... | 222 | 143.46 180.00 217.31 |
| Drew University, Brothers College; Madison, N. J..... | 55 | 147.92 179.00 224.17 |
| D'Youville College, Buffalo, N. Y.... | 70 | 131.36 152.50 190.71 |
| Earlham College, Richmond, Ind.... | 111 | 115.36 161.37 214.38 |
| Eastern Kentucky Teachers College, Richmond, Ky..... | 364 | 73.57 103.53 138.57 |
| Elmhurst College, Elmhurst, Ill..... | 99 | 136.87 176.50 206.94 |
| Emory University, Emory University, Ga..... | 171 | 121.87 159.00 197.08 |
| Emory Jr. College, Oxford, Ga..... | 29 | 90.83 117.50 163.75 |
| Emory Jr. College, Valdosta, Ga.... | 20 | 92.50 |
| Emporia, College of; Emporia, Kans. | 105 | 104.64 139.29 195.50 |
| Eureka College, Eureka, Ill..... | 73 | 94.37 147.50 185.50 |
| Evansville College, Evansville, Ind... | 82 | 123.13 153.75 185.00 |
| Fenn College, Cleveland, Ohio..... | 160 | 154.17 186.92 224.61 |
| Florida State College for Women, Tallahassee, Fla..... | 486 | 104.31 139.51 183.61 |
| Florida, University of; Gainesville, Fla..... | 428 | 108.75 146.15 190.48 |
| Franklin College of Indiana, Franklin, Ind..... | 70 | 109.29 142.00 191.25 |
| Georgian Court College, Lakewood, N. J..... | 38 | 147.50 180.00 212.50 |
| Gettysburg College, Gettysburg, Pa.. | 128 | 116.15 145.55 178.89 |
| Goshen College, Goshen, Ind..... | 53 | 115.63 153.00 181.50 |
| Graceland College, Lamoni, Iowa.... | 83 | 94.37 129.17 154.17 |
| Grinnell College, Grinnell, Iowa.... | 135 | 124.37 165.63 211.56 |
| Hanover College, Hanover, Ind..... | 145 | 103.21 141.87 179.81 |
| Haverford College, Haverford, Pa.... | 92 | 232.00 260.00 293.33 |
| Hobart College, Geneva, N. Y..... | 76 | 138.57 177.50 226.67 |
| Hood College, Frederick, Md..... | 113 | 117.50 160.83 205.36 |
| Howard University, Washington, D. C..... | 146 | 68.93 96.67 138.50 |
| Humboldt State Teachers College, Arcata, Calif..... | 84 | 108.33 142.86 185.00 |
| Hutchinson Jr. College, Hutchinson, Kans..... | 190 | 110.83 150.71 191.25 |
| Idaho, College of; Caldwell, Idaho.... | 164 | 110.63 143.08 183.75 |
| Idaho State Normal, Lewiston, Idaho | 204 | 80.77 117.50 159.23 |
| Illinois College, Jacksonville, Ill.... | 155 | 119.64 158.85 192.50 |
| Immaculata College, Immaculata, Pa. | 64 | 120.00 160.00 200.00 |
| Iowa Wesleyan College, Mt. Pleasant, Iowa..... | 98 | 96.87 135.00 161.25 |

| | <i>Number of Students</i> | <i>Gross Scores</i> | | |
|-----------------------------------------------------------|-------------------------------|----------------------|---------------|----------------------|
| | | <i>Q₁</i> | <i>Median</i> | <i>Q₃</i> |
| Jordan College, Menominee, Mich.... | 50 | 100.63 | 145.00 | 182.50 |
| Junior College of Connecticut, Bridge- port, Conn..... | 73 | 122.50 | 158.33 | 209.30 |
| Kalamazoo College, Kalamazoo, Mich..... | 98 | 131.87 | 173.33 | 214.17 |
| Keuka College, Keuka Park, N. Y.... | 45 | 160.42 | 203.75 | 229.37 |
| La Salle College, Philadelphia, Pa.... | 74 | 129.29 | 174.29 | 219.29 |
| Lawrence College, Appleton, Wis- consin..... | 204 | 132.31 | 175.00 | 212.50 |
| Lehigh University, Bethlehem, Pa.... | 332 | 145.42 | 180.00 | 220.66 |
| Lindenwood College, St. Charles, Mo..... | 127 | 110.50 | 137.92 | 185.31 |
| Linfield College, McMinnville, Ore... 173 | 173 | 121.25 | 149.00 | 188.86 |
| Loretto Heights, Denver, Colo..... | 27 | 83.75 | 141.67 | 172.50 |
| Louisiana State University, Baton Rouge, La..... | 821 | 86.04 | 121.51 | 164.03 |
| Louisville, University of; Louisville, Ky..... | 20 | 170.00 | 205.00 | 225.00 |
| Loyola University, Chicago, Ill..... | 214 | 107.22 | 143.00 | 187.31 |
| Luther College, Decorah, Iowa..... | 131 | 124.22 | 157.86 | 196.25 |
| Lyons Township Jr. College, La Grange, Ill..... | 108 | 128.57 | 171.11 | 203.00 |
| MacMurray College, Jacksonville, Ill. | 116 | 100.00 | 145.45 | 185.71 |
| Marion Institute, Marion, Ala..... | 60 | 115.00 | 145.00 | 186.00 |
| Maryland State Normal, Frostburg, Md..... | 26 | 88.33 | 120.00 | 192.50 |
| Maryland State Normal, Towson, Md..... | 75 | 115.50 | 150.63 | 184.64 |
| Maryland, University of; College Park, Md..... | 465 | 119.49 | 155.69 | 194.05 |
| Maryville College, Maryville, Tenn... | 268 | 101.58 | 141.25 | 187.33 |
| Marywood College, Scranton, Pa.... | 100 | 110.00 | 157.50 | 190.00 |
| Massachusetts State College, Am- herst, Mass..... | 300 | 151.11 | 182.31 | 216.67 |
| McPherson College, McPherson, Kans..... | 112 | 98.33 | 145.71 | 200.00 |
| Mercer University, Macon, Ga..... | 169 | 114.64 | 158.08 | 192.50 |
| Millsaps College, Jackson, Miss.... | 84 | 86.67 | 130.00 | 170.00 |
| Minnesota State Teachers College, St. Cloud, Minn..... | 249 | 109.56 | 136.25 | 169.87 |
| Minnesota State Teachers College, Winona, Minn..... | 197 | 116.35 | 143.23 | 179.82 |
| Missouri Valley College, Marshall, Mo..... | 82 | 104.17 | 144.29 | 167.92 |
| Montana State College, Bozeman, Mont..... | 327 | 119.83 | 152.75 | 190.15 |

| | <i>Number of Students</i> | <i>Gross Scores</i> | | |
|----------------------------------------------------------------------|-------------------------------|----------------------|---------------|----------------------|
| | | <i>Q₁</i> | <i>Median</i> | <i>Q₃</i> |
| Montana, University of; Missoula, Mont..... | 451 | 112.95 | 150.17 | 183.02 |
| M. St. Joseph College, Philadelphia, Pa..... | 72 | 130.00 | 175.00 | 216.67 |
| Mount Saint Joseph Jr. College, West Hartford, Conn..... | 51 | 135.50 | 163.75 | 204.17 |
| Mt. St. Vincent, College of; New York, N. Y..... | 120 | 130.00 | 164.00 | 206.67 |
| Muhlenberg College, Allentown, Pa.... | 102 | 124.37 | 163.75 | 204.17 |
| Nebraska State Teachers College, Peru, Nebr..... | 174 | 87.50 | 127.78 | 170.55 |
| Nebraska, University of; Lincoln, Nebr..... | 443 | 116.29 | 153.54 | 188.98 |
| New Hampshire, University of; Dur- ham, N. H..... | 412 | 116.36 | 157.04 | 199.09 |
| New Mexico State Teachers College, Silver City, N. M..... | 44 | 100.00 | 128.00 | 185.00 |
| New Mexico, University of; Albu- querque, N. M..... | 242 | 87.92 | 140.00 | 177.73 |
| New Rochelle College, New Rochelle, N. Y..... | 162 | 139.29 | 178.18 | 216.54 |
| New York, College of the City of; New York, N. Y..... | 1339 | 176.83 | 212.46 | 246.14 |
| North Central College, Naperville, Ill. | 94 | 114.37 | 148.00 | 192.50 |
| Northland College, Ashland, Wis.... | 29 | 92.50 | 155.00 | 185.83 |
| Northwestern University, Evanston, Ill..... | 853 | 142.72 | 179.91 | 224.13 |
| Oklahoma A and M College, Still- water, Okla..... | 766 | 81.22 | 118.04 | 155.44 |
| Oregon Normal School, Monmouth, Ore..... | 209 | 100.69 | 137.67 | 168.39 |
| Park College, Parkville, Mo..... | 167 | 115.28 | 153.88 | 195.68 |
| Parsons College, Fairfield, Iowa..... | 114 | 127.22 | 160.00 | 212.50 |
| Pennsylvania College for Women, Pittsburgh, Pa..... | 94 | 149.44 | 182.86 | 225.83 |
| Port Huron Jr. College, Port Huron, Mich..... | 82 | 111.00 | 154.00 | 200.83 |
| Redlands, University of; Redlands, Calif..... | 138 | 116.11 | 157.78 | 188.08 |
| Rhode Island State College, Kings- ton, R. I..... | 300 | 105.26 | 141.05 | 182.00 |
| Rochester, University of; Rochester, N. Y..... | 310 | 168.68 | 210.00 | 242.89 |
| Rochester, University of; School of Nursing, Rochester, N. Y..... | 23 | 138.75 | 185.00 | 226.25 |
| Rollins College, Winter Park, Fla.... | 80 | 107.50 | 163.33 | 205.00 |
| Rosary College, River Forest, Ill..... | 105 | 123.86 | 148.50 | 197.92 |

| | <i>Number of Students</i> | <i>Gross Scores</i> | | |
|-----------------------------------------------------------------|-------------------------------|----------------------|---------------|----------------------|
| | | <i>Q₁</i> | <i>Median</i> | <i>Q₃</i> |
| Rose Polytechnic Institute, Terre Haute, Ind..... | 48 | 125.00 | 180.00 | 220.00 |
| Rosemont College, Rosemont, Pa.... | 52 | 130.00 | 154.44 | 194.29 |
| Russell Sage College, Troy, N. Y.... | 144 | 145.33 | 183.85 | 211.67 |
| Saint Elizabeth, College of; Convent Station, N. J..... | 91 | 141.07 | 175.00 | 244.50 |
| St. Mary's College, Winona, Minn.... | 67 | 100.94 | 119.50 | 151.79 |
| St. Mary of the Woods, St. Mary of the Woods, Ind..... | 73 | 98.75 | 138.33 | 204.58 |
| St. Olaf College, Northfield, Minn... | 200 | 116.67 | 157.69 | 199.09 |
| St. Paul-Luther College, St. Paul, Minn..... | 25 | 82.50 | 110.83 | 127.50 |
| St. Thomas College, Scranton, Pa.... | 170 | 93.89 | 134.54 | 178.21 |
| St. Vincent College, Latrobe, Pa..... | 68 | 120.00 | 151.43 | 206.67 |
| Saint Xavier College, Chicago, Ill.... | 69 | 144.50 | 181.00 | 215.36 |
| Sam Houston State Teachers College, Huntsville, Texas..... | 230 | 55.42 | 90.87 | 120.25 |
| San Mateo Jr. College, San Mateo, Calif..... | 244 | 92.86 | 120.00 | 160.83 |
| Santa Rosa Jr. College, Santa Rosa, Calif..... | 166 | 110.83 | 137.06 | 169.61 |
| Simmons College, Boston, Mass..... | 324 | 144.00 | 180.34 | 212.50 |
| Simpson College, Indianola, Iowa.... | 155 | 94.56 | 124.23 | 160.36 |
| Sioux Falls College, Sioux Falls, S.D.. | 82 | 112.50 | 145.00 | 192.50 |
| Southern Methodist University, Dallas, Texas..... | 355 | 117.50 | 158.48 | 197.95 |
| South Georgia Teachers College, Collegeboro, Ga..... | 202 | 74.72 | 100.55 | 137.73 |
| Southwestern College, Winfield, Kans. | 177 | 94.50 | 134.41 | 165.47 |
| Southwestern Louisiana Institute, Lafayette, La..... | 346 | 50.19 | 79.37 | 124.50 |
| Southwest Missouri State Teachers College, Springfield, Mo..... | 310 | 85.34 | 119.52 | 169.55 |
| Spring Hill College, Spring Hill, Ala.. | 54 | 85.63 | 115.00 | 145.00 |
| Sweet Briar College, Sweet Briar, Va.. | 146 | 178.93 | 210.00 | 237.35 |
| Texas A and M College, College Station, Texas..... | 783 | 88.84 | 120.09 | 160.49 |
| Texas State College for Women, Denton, Texas..... | 330 | 82.93 | 114.57 | 153.00 |
| Texas Technological College, Lubbock, Texas..... | 596 | 93.02 | 129.03 | 166.30 |
| Thiel College, Greenville, Pa..... | 77 | 117.08 | 149.50 | 194.37 |
| Trinity College, Hartford, Conn..... | 314 | 171.56 | 213.57 | 258.75 |
| Trinity College, Washington, D. C.... | 86 | 137.50 | 183.33 | 230.71 |
| Tufts College, Medford, Mass..... | 102 | 148.75 | 180.00 | 216.43 |
| Tulsa, University of; Tulsa, Okla..... | 147 | 109.79 | 154.50 | 200.25 |
| Tusculum College, Greeneville, Tenn. | 93 | 90.42 | 121.75 | 181.50 |

| | <i>Number of Students</i> | <i>Gross Scores</i> | | |
|----------------------------------------------------------------------------|-------------------------------|----------------------|---------------|----------------------|
| | | <i>Q₁</i> | <i>Median</i> | <i>Q₃</i> |
| Ursinus College, Collegeville, Pa. | 119 | 119.50 | 167.22 | 212.08 |
| Valparaiso University, Valparaiso, Ind. | 131 | 104.69 | 138.64 | 176.94 |
| Vermont, University of; Burlington, Vt. | 374 | 126.04 | 161.20 | 202.33 |
| Virginia Polytechnic Institute, Blacks- burg, Va. | 310 | 87.66 | 130.00 | 163.25 |
| Washburn College, Topeka, Kans. | 236 | 117.14 | 157.65 | 200.00 |
| Washington College, Chestertown, Md. | 62 | 103.00 | 143.33 | 203.00 |
| Washington, State College of; Pull- man, Wash. | 728 | 102.61 | 137.50 | 177.22 |
| Washington State Normal School, Bellingham, Wash. | 183 | 104.84 | 138.08 | 180.21 |
| Washington University, St. Louis, Mo. | 467 | 138.15 | 174.82 | 213.88 |
| Washington & Jefferson College, Washington, Pa. | 123 | 110.62 | 143.89 | 190.36 |
| Washington & Lee University, Lex- ington, Va. | 265 | 124.83 | 161.07 | 202.08 |
| Wells College, Aurora, N. Y. | 75 | 173.05 | 199.00 | 240.50 |
| Westbrook Jr. College, Portland, Me. | 69 | 97.50 | 153.57 | 203.75 |
| Western Illinois State Teachers Col- lege, Macomb, Ill. | 404 | 91.11 | 126.33 | 168.33 |
| Western Reserve University, School of Nursing, Cleveland, Ohio. | 46 | 155.00 | 190.00 | 222.50 |
| Western State Teachers College, Kal- amazoo, Mich. | 377 | 109.74 | 147.68 | 181.31 |
| Westminster College, Fulton, Mo. | 120 | 104.29 | 136.67 | 175.71 |
| Westminster College, New Wilming- ton, Pa. | 224 | 122.35 | 161.67 | 203.00 |
| West Virginia State Teachers Col- lege, Shepherdstown, W. Va. | 70 | 95.00 | 130.00 | 175.00 |
| West Virginia University, Morgan- town, W. Va. | 288 | 94.29 | 133.64 | 176.52 |
| Wheaton College, Wheaton, Ill. | 187 | 147.29 | 183.18 | 216.59 |
| Willamette University, Salem, Ore. | 170 | 127.50 | 156.00 | 203.57 |
| William Smith College, Geneva, N. Y. | 38 | 151.25 | 177.50 | 232.50 |
| William Woods College, Fulton, Mo. | 189 | 102.50 | 142.08 | 186.46 |
| Wilson College, Chambersburg, Pa. | 140 | 177.14 | 217.50 | 252.50 |
| Womans College of Alabama, Mont- gomery, Ala. | 89 | 87.08 | 129.00 | 171.07 |
| Woman's College, New Haven, Conn. | 17 | | 175.00 | |
| Yankton College, Yankton, S. D. | 121 | 90.83 | 135.63 | 179.50 |
| York College, York, Nebr. | 75 | 119.17 | 146.43 | 183.13 |
| Yuba County Jr. College, Marysville, Calif. | 83 | 96.87 | 128.75 | 165.42 |

Arithmetic Test

Norms based on records of 11,388 students in 58 colleges.

| <i>Scores</i> | <i>Men</i> | | <i>Women</i> | | <i>* Total</i> | |
|---------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
| | <i>Frequency</i> | <i>Percentile</i> | <i>Frequency</i> | <i>Percentile</i> | <i>Frequency</i> | <i>Percentile</i> |
| 0 | 51 | .007 | 73 | .012 | 227 | .009 |
| 4 | 107 | .029 | 146 | .049 | 423 | .038 |
| 8 | 135 | .063 | 231 | .112 | 639 | .085 |
| 12 | 235 | .114 | 304 | .201 | 870 | .151 |
| 16 | 240 | .180 | 243 | .292 | 874 | .228 |
| 20 | 302 | .256 | 315 | .385 | 1042 | .312 |
| 24 | 338 | .345 | 312 | .489 | 1110 | .406 |
| 28 | 327 | .437 | 297 | .592 | 1031 | .500 |
| 32 | 305 | .525 | 255 | .684 | 992 | .589 |
| 36 | 302 | .609 | 218 | .763 | 926 | .673 |
| 40 | 301 | .694 | 190 | .831 | 880 | .753 |
| 44 | 278 | .774 | 147 | .887 | 753 | .824 |
| 48 | 224 | .844 | 127 | .933 | 598 | .884 |
| 52 | 172 | .899 | 68 | .965 | 432 | .929 |
| 56 | 126 | .941 | 41 | .983 | 278 | .960 |
| 60 | 60 | .967 | 15 | .993 | 140 | .978 |
| 64 | 45 | .981 | 10 | .997 | 88 | .988 |
| 68 | 23 | .991 | 2 | .999 | 44 | .994 |
| 72 | 18 | .996 | 1 | .999 | 30 | .998 |
| 76 | 2 | .999 | — | .999 | 8 | .999 |
| 80 | 2 | .999 | 1 | .999 | 3 | .999 |
| Total | 3593 | | 2996 | | 11388 | |

| | <i>Men</i> | <i>Women</i> | <i>Total</i> |
|---------------------|------------|--------------|--------------|
| Lower Quartile..... | 19.72 | 13.93 | 17.15 |
| Median..... | 30.81 | 24.85 | 27.97 |
| Upper Quartile..... | 42.74 | 35.30 | 39.85 |

* The total includes the scores of 4,799 students not classified according to sex.

Opposites Test

Norms based on records of 11,562 students in 58 colleges.

| Scores | <i>Men</i> | | <i>Women</i> | | <i>* Total</i> | |
|--------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
| | <i>Frequency</i> | <i>Percentile</i> | <i>Frequency</i> | <i>Percentile</i> | <i>Frequency</i> | <i>Percentile</i> |
| 0 | 226 | .035 | 147 | .027 | 745 | .032 |
| 3 | 50 | .079 | 22 | .058 | 135 | .070 |
| 6 | 57 | .096 | 31 | .067 | 173 | .083 |
| 9 | 65 | .115 | 40 | .080 | 187 | .099 |
| 12 | 64 | .135 | 31 | .093 | 237 | .117 |
| 15 | 98 | .161 | 57 | .109 | 326 | .142 |
| 18 | 107 | .193 | 84 | .135 | 387 | .173 |
| 21 | 147 | .233 | 102 | .169 | 489 | .210 |
| 24 | 166 | .282 | 107 | .207 | 547 | .255 |
| 27 | 153 | .332 | 127 | .250 | 583 | .304 |
| 30 | 186 | .385 | 127 | .297 | 643 | .357 |
| 33 | 226 | .450 | 163 | .349 | 742 | .417 |
| 36 | 211 | .519 | 179 | .412 | 749 | .481 |
| 39 | 187 | .581 | 183 | .478 | 734 | .546 |
| 42 | 155 | .635 | 161 | .541 | 666 | .606 |
| 45 | 161 | .685 | 145 | .597 | 612 | .661 |
| 48 | 145 | .733 | 162 | .653 | 594 | .714 |
| 51 | 151 | .779 | 147 | .709 | 542 | .763 |
| 54 | 100 | .819 | 129 | .760 | 453 | .806 |
| 57 | 115 | .852 | 131 | .808 | 453 | .845 |
| 60 | 83 | .883 | 117 | .853 | 410 | .882 |
| 63 | 100 | .912 | 105 | .894 | 354 | .915 |
| 66 | 81 | .940 | 81 | .928 | 293 | .943 |
| 69 | 60 | .963 | 63 | .954 | 220 | .966 |
| 72 | 43 | .979 | 52 | .975 | 162 | .982 |
| 75 | 26 | .989 | 26 | .989 | 75 | .992 |
| 78 | 16 | .996 | 13 | .997 | 44 | .997 |
| 81 | 3 | .999 | 4 | .999 | 7 | .999 |

| | | | |
|-------|------|------|--------|
| Total | 3182 | 2736 | 11,562 |
|-------|------|------|--------|

| | <i>Men</i> | <i>Women</i> | <i>Total</i> |
|---------------------|------------|--------------|--------------|
| Lower Quartile..... | 23.62 | 28.49 | 25.16 |
| Median..... | 36.65 | 41.48 | 38.35 |
| Upper Quartile..... | 50.64 | 54.86 | 51.62 |

* The total includes the scores of 5,644 students not classified according to sex.

Completion Test

Norms based on records of 11,837 students in 58 colleges.

| Scores | <i>Men</i> | | <i>Women</i> | | <i>* Total</i> | |
|--------|------------|------------|--------------|------------|----------------|------------|
| | Frequency | Percentile | Frequency | Percentile | Frequency | Percentile |
| 0 | 7 | .001 | 4 | .001 | 14 | .001 |
| 2 | 10 | .003 | 3 | .002 | 14 | .002 |
| 4 | 16 | .006 | 7 | .003 | 31 | .004 |
| 6 | 34 | .013 | 27 | .009 | 86 | .009 |
| 8 | 52 | .024 | 30 | .018 | 115 | .017 |
| 10 | 73 | .041 | 44 | .030 | 187 | .029 |
| 12 | 88 | .062 | 64 | .048 | 249 | .048 |
| 14 | 112 | .088 | 107 | .075 | 337 | .073 |
| 16 | 153 | .123 | 104 | .109 | 424 | .105 |
| 18 | 171 | .166 | 129 | .147 | 516 | .145 |
| 20 | 166 | .211 | 136 | .190 | 543 | .190 |
| 22 | 241 | .264 | 176 | .241 | 711 | .242 |
| 24 | 229 | .326 | 172 | .297 | 690 | .302 |
| 26 | 233 | .387 | 199 | .357 | 737 | .362 |
| 28 | 262 | .453 | 196 | .421 | 796 | .427 |
| 30 | 254 | .521 | 208 | .487 | 805 | .494 |
| 32 | 214 | .582 | 225 | .557 | 782 | .561 |
| 34 | 225 | .640 | 197 | .626 | 730 | .625 |
| 36 | 198 | .696 | 166 | .684 | 664 | .684 |
| 38 | 179 | .746 | 160 | .737 | 587 | .737 |
| 40 | 153 | .789 | 123 | .783 | 508 | .783 |
| 42 | 140 | .828 | 128 | .824 | 481 | .825 |
| 44 | 111 | .861 | 81 | .858 | 335 | .859 |
| 46 | 97 | .889 | 66 | .882 | 298 | .886 |
| 48 | 85 | .913 | 73 | .904 | 262 | .909 |
| 50 | 66 | .933 | 59 | .925 | 217 | .930 |
| 52 | 45 | .947 | 38 | .941 | 165 | .946 |
| 54 | 42 | .959 | 47 | .955 | 155 | .959 |
| 56 | 42 | .969 | 30 | .967 | 115 | .971 |
| 58 | 23 | .978 | 26 | .976 | 79 | .979 |
| 60 | 20 | .984 | 22 | .984 | 59 | .985 |
| 62 | 19 | .989 | 10 | .989 | 52 | .989 |
| 64 | 12 | .993 | 16 | .994 | 43 | .994 |
| 66 | 14 | .997 | 5 | .997 | 26 | .997 |
| 68 | 3 | .999 | 1 | .998 | 9 | .998 |
| 70 | — | .999 | 1 | .998 | 4 | .999 |
| 72 | 1 | .999 | 3 | .999 | 7 | .999 |
| 74 | — | .999 | 1 | .999 | 3 | .999 |
| 76 | — | .999 | — | .999 | — | .999 |
| 78 | 1 | .999 | — | .999 | 1 | .999 |
| 80 | — | .999 | — | .999 | — | .999 |
| Total | 3791 | | 3084 | | 11,837 | |

Artificial Language Test

Norms based on records of 11,079 students in 58 colleges.

| Scores | <i>Men</i> | | <i>Women</i> | | <i>* Total</i> | |
|--------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
| | <i>Frequency</i> | <i>Percentile</i> | <i>Frequency</i> | <i>Percentile</i> | <i>Frequency</i> | <i>Percentile</i> |
| 0-1 | 63 | .018 | 60 | .011 | 372 | .017 |
| 2-3 | 20 | .042 | 14 | .025 | 131 | .039 |
| 4-5 | 34 | .058 | 27 | .033 | 192 | .054 |
| 6-7 | 47 | .081 | 38 | .045 | 225 | .073 |
| 8-9 | 54 | .109 | 50 | .062 | 307 | .097 |
| 10-11 | 85 | .149 | 56 | .082 | 372 | .127 |
| 12-13 | 87 | .199 | 47 | .102 | 456 | .165 |
| 14-15 | 90 | .250 | 73 | .124 | 523 | .209 |
| 16-17 | 86 | .301 | 80 | .153 | 537 | .257 |
| 18-19 | 98 | .354 | 113 | .189 | 568 | .307 |
| 20-21 | 91 | .408 | 118 | .234 | 567 | .358 |
| 22-23 | 100 | .463 | 120 | .279 | 587 | .410 |
| 24-25 | 108 | .523 | 118 | .324 | 599 | .464 |
| 26-27 | 84 | .578 | 128 | .370 | 490 | .513 |
| 28-29 | 80 | .625 | 98 | .413 | 471 | .556 |
| 30-31 | 75 | .669 | 114 | .453 | 472 | .598 |
| 32-33 | 58 | .708 | 114 | .496 | 403 | .638 |
| 34-35 | 56 | .741 | 109 | .539 | 388 | .674 |
| 36-37 | 44 | .769 | 101 | .598 | 308 | .705 |
| 38-39 | 43 | .794 | 99 | .616 | 322 | .734 |
| 40-41 | 37 | .817 | 92 | .652 | 288 | .761 |
| 42-43 | 38 | .839 | 75 | .684 | 240 | .785 |
| 44-45 | 31 | .859 | 73 | .712 | 253 | .807 |
| 46-47 | 25 | .875 | 58 | .737 | 194 | .827 |
| 48-49 | 25 | .889 | 52 | .758 | 175 | .844 |
| 50-51 | 20 | .902 | 61 | .779 | 179 | .860 |
| 52-53 | 22 | .914 | 59 | .802 | 170 | .876 |
| 54-55 | 24 | .928 | 42 | .821 | 137 | .889 |
| 56-57 | 18 | .939 | 59 | .841 | 129 | .902 |
| 58-59 | 12 | .948 | 43 | .860 | 115 | .913 |
| 60-61 | 6 | .953 | 34 | .875 | 95 | .922 |
| 62-63 | 11 | .958 | 34 | .887 | 104 | .931 |
| 64-65 | 12 | .965 | 35 | .901 | 87 | .939 |
| 66-67 | 4 | .969 | 28 | .913 | 82 | .947 |
| 68-69 | 8 | .973 | 31 | .924 | 76 | .954 |
| 70-71 | 4 | .976 | 33 | .936 | 70 | .961 |
| 72-73 | 7 | .979 | 23 | .946 | 53 | .967 |
| 74-75 | 3 | .982 | 25 | .956 | 65 | .972 |
| 76-77 | 7 | .985 | 24 | .965 | 56 | .977 |
| 78-79 | 3 | .988 | 25 | .974 | 53 | .982 |
| 80-81 | 5 | .990 | 18 | .982 | 49 | .987 |
| 82-83 | 2 | .992 | 17 | .988 | 38 | .991 |
| 84-85 | 7 | .995 | 12 | .994 | 31 | .994 |
| 86-87 | 3 | .998 | 9 | .998 | 23 | .996 |
| 88-89 | 1 | .999 | 2 | .999 | 21 | .999 |
| 90 | 1 | .999 | | .999 | 6 | .999 |

| | <i>Men</i> | <i>Women</i> | <i>Total</i> |
|---------------------|------------|--------------|--------------|
| Lower Quartile..... | 14.99 | 21.73 | 16.71 |
| Median..... | 24.27 | 33.17 | 26.42 |
| Upper Quartile..... | 35.58 | 48.22 | 40.12 |

Analogies Test

Norms based on records of 11,601 students in 58 colleges.

| <i>Scores</i> | <i>Men</i> | | <i>Women</i> | | <i>* Total</i> | |
|---------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|
| | <i>Frequency</i> | <i>Percentile</i> | <i>Frequency</i> | <i>Percentile</i> | <i>Frequency</i> | <i>Percentile</i> |
| 0 | 53 | .009 | 28 | .005 | 171 | .007 |
| 2 | 78 | .034 | 72 | .021 | 293 | .027 |
| 4 | 91 | .066 | 103 | .051 | 370 | .056 |
| 6 | 89 | .099 | 111 | .087 | 421 | .090 |
| 8 | 90 | .133 | 99 | .122 | 431 | .127 |
| 10 | 75 | .164 | 81 | .152 | 370 | .161 |
| 12 | 57 | .188 | 85 | .180 | 323 | .191 |
| 14 | 66 | .211 | 72 | .206 | 287 | .217 |
| 16 | 54 | .234 | 75 | .231 | 283 | .242 |
| 18 | 58 | .255 | 60 | .254 | 269 | .265 |
| 20 | 75 | .279 | 67 | .275 | 300 | .290 |
| 22 | 72 | .307 | 75 | .299 | 334 | .318 |
| 24 | 84 | .336 | 86 | .326 | 357 | .347 |
| 26 | 85 | .368 | 100 | .357 | 379 | .379 |
| 28 | 103 | .403 | 118 | .394 | 452 | .415 |
| 30 | 128 | .446 | 152 | .439 | 510 | .456 |
| 32 | 127 | .494 | 133 | .487 | 530 | .501 |
| 34 | 143 | .544 | 154 | .535 | 609 | .550 |
| 36 | 121 | .594 | 185 | .592 | 654 | .605 |
| 38 | 175 | .649 | 198 | .657 | 762 | .666 |
| 40 | 172 | .714 | 191 | .722 | 729 | .730 |
| 42 | 172 | .778 | 190 | .786 | 717 | .792 |
| 44 | 127 | .834 | 176 | .847 | 599 | .849 |
| 46 | 108 | .878 | 145 | .901 | 530 | .898 |
| 48 | 108 | .918 | 94 | .941 | 386 | .937 |
| 50 | 74 | .952 | 72 | .969 | 275 | .966 |
| 52 | 46 | .974 | 31 | .987 | 147 | .984 |
| 54 | 34 | .989 | 20 | .995 | 78 | .994 |
| 56 | 7 | .997 | 4 | .999 | 26 | .998 |
| 58 | 4 | .999 | — | .999 | 9 | .999 |
| Total | 2676 | | 2977 | | 11,601 | |

| | <i>Men</i> | <i>Women</i> | <i>Total</i> |
|---------------------|------------|--------------|--------------|
| Lower Quartile..... | 18.55 | 18.62 | 17.66 |
| Median..... | 33.26 | 33.57 | 32.95 |
| Upper Quartile..... | 42.13 | 41.87 | 41.63 |

* The total includes the scores of 5,948 students not classified according to sex.

Equivalent Scores for 1931, 1932, and 1933 Editions

| Per- centile rank | Score in 1931 Edi- tion | Score in 1932 Edi- tion | Score in 1933 Edi- tion | Per- centile rank | Score in 1931 Edi- tion | Score in 1932 Edi- tion | Score in 1933 Edi- tion | Per- centile rank | Score in 1931 Edi- tion | Score in 1932 Edi- tion | Score in 1933 Edi- tion |
|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 | 40 | 46 | 38 | 34 | 122 | 134 | 129 | 67 | 175 | 187 | 184 |
| 2 | 49 | 56 | 47 | 35 | 124 | 136 | 131 | 68 | 177 | 189 | 186 |
| 3 | 54 | 62 | 54 | 36 | 125 | 137 | 132 | 69 | 179 | 191 | 188 |
| 4 | 59 | 66 | 59 | 37 | 127 | 139 | 134 | 70 | 181 | 193 | 189 |
| 5 | 63 | 71 | 64 | 38 | 129 | 141 | 136 | 71 | 182 | 194 | 191 |
| 6 | 66 | 74 | 68 | 39 | 130 | 142 | 137 | 72 | 184 | 196 | 193 |
| 7 | 70 | 78 | 71 | 40 | 132 | 144 | 139 | 73 | 186 | 198 | 195 |
| 8 | 72 | 80 | 74 | 41 | 133 | 145 | 140 | 74 | 188 | 201 | 197 |
| 9 | 75 | 85 | 77 | 42 | 135 | 147 | 142 | 75 | 190 | 203 | 199 |
| 10 | 77 | 87 | 80 | 43 | 136 | 148 | 144 | 76 | 192 | 205 | 202 |
| 11 | 80 | 91 | 83 | 44 | 138 | 150 | 145 | 77 | 194 | 206 | 204 |
| 12 | 82 | 94 | 85 | 45 | 139 | 151 | 147 | 78 | 196 | 208 | 206 |
| 13 | 84 | 95 | 88 | 46 | 141 | 153 | 149 | 79 | 198 | 210 | 208 |
| 14 | 86 | 97 | 90 | 47 | 143 | 155 | 150 | 80 | 200 | 212 | 210 |
| 15 | 89 | 101 | 93 | 48 | 144 | 157 | 152 | 81 | 202 | 214 | 213 |
| 16 | 91 | 103 | 95 | 49 | 146 | 159 | 154 | 82 | 205 | 217 | 215 |
| 17 | 93 | 105 | 97 | 50 | 147 | 160 | 155 | 83 | 207 | 219 | 218 |
| 18 | 95 | 107 | 99 | 51 | 149 | 162 | 157 | 84 | 209 | 220 | 220 |
| 19 | 97 | 110 | 101 | 52 | 151 | 164 | 158 | 85 | 212 | 223 | 223 |
| 20 | 99 | 112 | 103 | 53 | 152 | 165 | 160 | 86 | 215 | 226 | 226 |
| 21 | 101 | 114 | 105 | 54 | 154 | 166 | 162 | 87 | 217 | 228 | 229 |
| 22 | 102 | 115 | 107 | 55 | 155 | 168 | 163 | 88 | 220 | 231 | 233 |
| 23 | 104 | 117 | 109 | 56 | 157 | 169 | 166 | 89 | 223 | 234 | 236 |
| 24 | 106 | 119 | 111 | 57 | 159 | 171 | 167 | 90 | 226 | 237 | 239 |
| 25 | 107 | 120 | 113 | 58 | 160 | 172 | 168 | 91 | 229 | 240 | 243 |
| 26 | 109 | 121 | 115 | 59 | 162 | 174 | 170 | 92 | 233 | 244 | 247 |
| 27 | 111 | 123 | 116 | 60 | 163 | 176 | 172 | 93 | 237 | 248 | 252 |
| 28 | 112 | 124 | 118 | 61 | 165 | 177 | 173 | 94 | 242 | 253 | 257 |
| 29 | 114 | 126 | 120 | 62 | 167 | 179 | 175 | 95 | 247 | 258 | 262 |
| 30 | 116 | 128 | 122 | 63 | 168 | 180 | 177 | 96 | 253 | 264 | 269 |
| 31 | 117 | 129 | 124 | 64 | 170 | 182 | 179 | 97 | 260 | 271 | 277 |
| 32 | 119 | 131 | 125 | 65 | 172 | 184 | 180 | 98 | 269 | 279 | 286 |
| 33 | 121 | 133 | 127 | 66 | 173 | 185 | 182 | 99 | 284 | 295 | 302 |

HIGH SCHOOL EDITION

In January, 1934, a special form of the Psychological Examination designed for use in grade 9-12 was issued. It has been used in an extensive survey in the high school of Iowa. This survey is under the direction of Professor E. F. Lindquist of the University of Iowa. The publication of an annual edition especially prepared for grades 9-12 may become a part

of the psychological test program of the American Council on Education. It is believed that such a policy would be favored by the colleges since it would mean that those high schools using the test would not use the same form as the colleges, and hence that scores on the college test of students who have taken the test in high school would be more reliable.

THE 1934 EDITION

The results of the 1933 edition suggest two or three changes that will be made in the 1934 edition. The present form of the Artificial Language test seems to be very satisfactory, but the scoring directions regarding omitted sentences will be revised. The instructions to the subject for the Opposites test will be revised to eliminate so many zero scores. A few changes in the directions for the Analogies test are also being considered. All these changes will tend to increase the reliability of the test scores.

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THELMA GWINN THURSTONE,
The University of Chicago.

Placement and Attainment Examinations in Foreign Languages

I

THE University of Wisconsin has for some years been engaged in various attempts to secure greater accuracy of placement, to raise the level of achievement, and to reduce the mortality in modern language classes. It is the purpose of the present paper to present a brief review of the steps that led to the incorporation of the new-type tests in the regular curriculum here and to discuss the nature and results of these tests for the period they have been in regular use, namely, 1930-1933.

At the end of the World War, because of the large number of beginning students in modern foreign languages, particularly in French and Spanish, the elementary courses here were organized under a chairman and a committee whose business it was to select suitable texts for objectives agreed upon *a priori*, to make outlines of courses accordingly, to prepare examinations—mostly old-type tests—and to correct the latter by a committee which ensured a relative degree of objectivity and fairness. In spite of this elaborate system and class inspection by those in charge of these large groups of teachers and students, there was found to be a wide disparity in results, particularly in scholastic mortality, which led to the institution of the “troubleman” system by the university authorities in the departments of Romance Languages, English, and Chemistry, where the work of literally thousands of students and hundreds of teachers was closely scrutinized. The main purpose of this plan was to have all students incurring marks below C (fair) at the end of the first month interviewed by their instructor, who would make a written report on the causes of unsatisfactory work and send both the report and the student to the “troubleman,” who acted as an assistant dean in handling the

cases referred to him. From about 8,000 personal interviews extending over four years (1920-24) and from data furnished the "troublemen," the following five general conclusions concerning the causes of poor student results were arrived at: First of all it was unanimously agreed that there was a group intellectually unfit to undertake and complete a four-year college course. It is probably safe to estimate this number to comprise 20 per cent of those interviewed. Next came the group of loafers, floaters, drifters, and aimless bohemians. A careful scrutiny of their scholastic record as well as their conduct would have saved another 20 per cent from the toils of the exacting college instructor and the heavy hand of the dean. A third group was made up of those who were obliged to earn all or part of their way through college. This probably accounted for another 20 per cent of the students doing unsatisfactory work. Those who were vocationally maladjusted constituted the fourth group and were responsible, no doubt, for another 20 per cent of the poor, conditioned, and failing students. We include in this category those whose extra-curricular activities and interests were such that they jeopardized not only their scholastic record but often their academic career. The fifth and last group of unsatisfactory students interviewed were victims of poor instruction in both school and college.

What were some of the principal results of this experiment with "troublemen" at Wisconsin? The most conspicuous change made here was the formation of upper and lower group students in the first three years' work of French based on the final term marks. This plan in effect was simply to segregate the students with final grades of A and B at the end of first, second, third, and fourth semesters into star or upper group sections, placing the others in lower group sections. While no modifications in the minimum requirements for the first two years have been made, it has been understood that more oral and aural instruction in the better sections should be given, while stress on the fundamentals of grammar, rapid reading, and translation should be carried on in the lower group sec-

tions. This scheme has made for decidedly more effective teaching all along the line, even if the mortality of student scholarship has not shown any marked change except as indicated below in connection with the reading method and the employment of standardized tests.

The next experiment that led up to the regular use of the placement and attainment examinations at Wisconsin had to do with the bearing of method on the problem of student scholarship mortality. The reading method, which has as its main objective the direct comprehension of the written page, was tried out here in 1924-25, 1927-28, and in 1929-31 as a substitute for the eclectic method which has usually been practised here. The principal result of these experiments, particularly that of 1929-31 as demonstrated by the teachers marks, was the noticeable improvement in the latter; the percentage of A's, B's, and C's increased from about 58 to about 71 and that of D's, E's, F's, and Incompletes decreased from about 41 to about 28. Furthermore, results obtained from the administration of the American Council Alpha French Tests and the American Council French Grammar Test employed for comparable measurement demonstrate that these percentages are relatively reliable. In addition to this, it has been shown elsewhere (see "Mortality of Modern Language Students" in the *Modern Language Journal* for November, 1932) that the difference in grades between the eclectic method group and the reading method group is not due to chance, nor is it attributable to fundamental differences between student and teaching abilities involved.

Probably no factor was more influential in the matter of the final adoption of the placement and attainment examinations here by the faculty and regents than the fact that different men at Wisconsin participated in their construction and validation under the leadership of the Modern Foreign Language Study and made known their practical value through various publications to the instructional and administrative officers in schools and colleges. It is not necessary for our purpose to rehearse the long and interesting story of the struggle between

the conservatives and the liberals in secondary and higher institutions of learning in regard to the employment and significance of the new-type tests in our field. We allude to this phase of their history merely to remind our readers that they were at first unwelcome children but finally won a place for themselves in the family circle. What concerns us here is what they disclose about individual variations and the overlapping of distributions. There is no doubt that the misclassification of students has been one of the most knotty problems to be solved by school and college teachers and leaders and that any educational device which offers even a partial solution of the difficulty should not be ignored. As space is limited, we shall be able to set forth only a few illustrations of the many uses to which we put the new-type tests here from 1925 up to the present time.

We first tried out at Wisconsin for placement purposes one of the new-type tests, namely, the American Council Alpha French Test, in September, 1928, and learned that the students who entered with 2 semesters, 4 semesters, 6 semesters, and 8 semesters of high school preparation were 17, 7, 14, and 3 points respectively below the national norms in percentile rank. After one semester of college training these same students took an equivalent form of the American Council Test, and, in spite of the handicap with which both students and instructors had to contend, the entrants raised their average percentile rank 9, 10, 16, and 15 points respectively above the national norms. As neither the students nor the instructors knew that they were to be submitted to the second test, it cannot be claimed that they consciously aimed to meet the requirements of such a test. The American Council Tests were again administered in September, 1930, to the entrants in French, Spanish, and German at the 2d, 4th, 6th, and 8th semester levels, and it was discovered that for the French group of 389 students the average percentile rank below norm was 11.48 points, for the Spanish group of 89 it was 10.6 points, and for the German group of 159 it was 10.5 points. It was evident that this entering group, like that of 1928, was below norm

and hence would be at a disadvantage in trying to articulate with the higher university requirements unless it were reclassified. This was done by taking advantage of the results of the 1928 entering group and the data furnished by this same group on being retested in January, 1929.

The following principle was adopted for placement purposes, namely, to advance a student, for example a 4 semester H. S. French student, one or more semesters whenever his composite percentile rank was nearer to the fifth or sixth semester norm than it was to his own, or contrariwise to demote him a semester or more whenever his composite percentile rank was nearer to the next lower semester norm than his own. This principle was arrived at scientifically by the administration of 1,160 Columbia Research Bureau Tests in February, 1927, to our 1st, 2d, 3d, 4th, 5th, and 7th semester students. We learned by this testing that 43 per cent of our fourth semester French students in February, 1927, were nearer to the third semester norm than to their own and that 34 per cent of the same group were nearer to the fifth semester mean than to their own. The testing in January, 1929, illustrated a somewhat similar displacement or misclassification of our students; for instance, 20 per cent of our third semester French people were nearer to the mean of the fifth semester students than to their own, whereas 31 per cent of the fifth semester were nearer to the mean of the third than to their own.

In order to ascertain whether any reliance could be placed on the predictive value of the American Council Tests used for placement purposes, the history of 396 entrants in French, 65 in Spanish, and 71 in German, all of September, 1928, were followed through for one semester to learn what would happen to them in the natural course of events. In Table I we have used the French group as typical and have arranged the proper placement of Freshmen and Transfers in accordance with the principle explained above in normal, high, and low groups as determined not by their school and college credits but by their actual achievement as shown by their composite percentile rank on the A. C. Alpha French Test, Form A, administered at the

University of Wisconsin, September, 1928. It will be noted that 119 were placed as normal, i.e., as agreeing with their school units or college credits in the registrar's office; 128 as high, i.e., as having too much school or college credit; and 149 as low, i.e., as having too little school or college credit. A glance at the table also shows the distribution of the semester grades of these same entrants at the end of their first semester with us. Teachers gave them these marks independent of their placement by the A. C. Alpha Test, as the results of the latter were not generally known. The predictive value of the tests is established in a striking way if we accept the instructors' marks as the criteria. An examination of the figures for both groups reveals that those estimated as normally placed received 2 A's, 28 B's, 55 C's, 26 D's, 6 E's, and 2 F's. As might be expected among those placed too high by their school or college credits, it will be seen that, of the 128, there were 1 A, 9 B's, 36 C's, 43 D's, 20 E's, and 19 F's. Of those placed too low by their school or college credits, 38 won A's, 59 B's, 42 C's, 8 D's, 1 E, and 1 F. Such results ought to be a reasonable indication of the use and reliability of the best type of achievement test, here used for placement purposes, even to the most meticulous of its critics.

TABLE 1

The final Grades of 396 Freshmen and Transfers at Mid-Year's, 1929, placed in their various courses in accordance with their school and college credits. It is clear that the immediate classification of the students by the results of the American Council Alpha French Test administered in September, 1928, would have been justified by the actual results as shown by the term marks.

| | Placement on Alpha Test | Totals | Final Grades | | | | | |
|-------------|-------------------------------|--------|--------------|----|----|----|----|----|
| | | | A | B | C | D | E | F |
| Freshmen | Normal | 90 | 1 | 23 | 40 | 18 | 6 | 2 |
| | High | 80 | 1 | 4 | 18 | 30 | 13 | 14 |
| | Low | 107 | 31 | 43 | 26 | 5 | 1 | 1 |
| Transfers | Normal | 29 | 1 | 5 | 15 | 8 | 0 | 0 |
| | High | 48 | 0 | 5 | 18 | 13 | 7 | 5 |
| | Low | 42 | 7 | 16 | 16 | 3 | 0 | 0 |
| Both Groups | Normal | 119 | 2 | 28 | 55 | 26 | 6 | 2 |
| | High | 128 | 1 | 9 | 36 | 43 | 20 | 19 |
| | Low | 149 | 38 | 59 | 42 | 8 | 1 | 1 |

What is the present status of the experiment in foreign language placement at Wisconsin is a question that has often been asked the writer by the teachers and administrative officers in many schools and colleges in different parts of the United States. Probably next to the Experimental College established here in 1925 and discontinued last year, the new language requirements at Wisconsin have attracted the most attention from an educational point of view. This interest is not difficult to explain. When the faculty and the Regents of the University of Wisconsin adopted the new Fish curriculum in 1930, they thereby laid emphasis on two important requirements which form the backbone of recent educational development, namely, the use of placement and attainment examinations. As the nature and functioning of the former have been explained at length by President Frank in the *Review of Reviews* for August, 1930, by the late Carl Russell Fish in *School and Society* for February 14, 1931, and by the writer in the *Modern Language Journal* for January, 1931, it may suffice to state here that freshmen and transfers from other colleges who intend to go on with a foreign language which is being offered as an entrance subject are required to take these examinations. For this purpose the American Council, the Columbia Research Bureau, and the Cooperative Tests in French, Spanish, German, and Latin, and specially prepared examinations in Latin and Italian have been employed in 1930, 1931, 1932, and 1933 respectively, and students have been advanced, normally placed, or demoted in accordance with the results of these tests. The employment of these highly standardized tests as outside criteria, guarded by intelligence tests and the student's previous record, naturally emphasizes actual achievement and not the mere accumulation of units or credits in the subject.

As an illustration of the effect of the use of the placement tests in foreign languages, it may be stated that approximately 2,600 freshmen and transfers from other colleges took them at the beginning of the academic year in 1930, 1931, 1932 and 1933. We have assembled the data for the four language groups that took the standardized tests mentioned above as

well as the specially prepared tests and set them forth in Table 2, where proper placement was observed, and in Table 3, where the students were placed regardless of the tests.

TABLE 2

Final Grades at Mid-Year's, 1931, 1932, 1933, and 1934 of 2301 Freshmen and Transfers who took the placement tests in French, Spanish, German, and Latin in September 1930, 1931, 1932, and 1933 and who were properly placed in accordance with these tests.

| Placement | A's | B's | C's | D's | E's | F's | N |
|-----------|-----------|-----------|-----------|-----------|---------|----------|------|
| Normal... | 227 (13%) | 583 (33%) | 628 (35%) | 237 (13%) | 33 (2%) | 66 (4%) | 1774 |
| Advanced | 132 (31%) | 199 (47%) | 79 (18%) | 13 (3%) | 3 (1%) | 1 (0%) | 427 |
| Retarded. | 4 (4%) | 14 (14%) | 30 (30%) | 23 (23%) | 8 (8%) | 21 (21%) | 100 |
| Total... | 363 (16%) | 796 (34%) | 737 (32%) | 273 (12%) | 44 (2%) | 88 (4%) | 2301 |

We shall now take the summaries of the three languages in the first of these tables as an example of how the plan works. Of the 1,774 cases held stationary—that is, considered normal in accordance with their previous records—all but 6 per cent passed the various class requirements in the subject at the end of the first semester, 81 per cent of them earning A's, B's, and C's. Of the 427 cases advanced one or more semesters beyond their school or college credits, all except about 1 per cent passed the requirements of these advanced courses, 96 per cent of them securing A's, B's, and C's. Of the 100 cases retarded, about 29 per cent failed to pass. The facts presented here are approximately true for the ten incomplete cases not included here. While no claim of perfection is made for the system, the very fact that it has worked in 96 per cent of the advanced cases is a convincing argument of the predictive value of the placement tests as foretold in Table 1. If financiers prior to 1929 could have predicted 96 per cent of the successful stocks and bonds on the markets here and abroad, there would probably not have been any world-wide depression nor any need for the Emergency Board of Wisconsin and the National Industrial Recovery Act of 1933. Through the administration of these tests to about 2,300 entrants, the students have saved during the past four years about 3,200 credits in foreign lan-

guage study and the University could have made a possible economy of nearly \$19,000 in language instruction.

TABLE 3

Final Grades at Mid-Year's 1931, 1932, 1933, and 1934 of 272 Freshmen and Transfers who took the Placement Tests in French, German, Spanish, and Latin in September, 1930, 1931, 1932, and 1933 and who were placed regardless of these tests.

| Placement | A's | B's | C's | D's | E's | F's | N |
|-----------|---------|----------|---------|---------|-------|-------|-----|
| Normal... | 36(33%) | 46(43%) | 15(14%) | 10(9%) | | 1(1%) | 108 |
| Advanced | 12(14%) | 24(29%) | 24(29%) | 15(18%) | 3(4%) | 5(6%) | 83 |
| Retarded. | 15(19%) | 31(38%) | 23(28%) | 8(10%) | 1(1%) | 3(4%) | 81 |
| Total... | 63(23%) | 101(37%) | 62(23%) | 33(12%) | 4(2%) | 9(3%) | 272 |

That "the best laid schemes o' mice and men gang aft agley" of the poet is as applicable to the operation of the placement tests at Wisconsin as to so many other problems may be seen from an examination of the data set forth in Table 3, where we have 272 cases that took the standardized tests administered for the proper classification of students but who were placed regardless of these tests. This information has been obtained at the end of the first semester when the final marks must be reported to the registrar's office. This state of affairs came about first of all from a lack of perfect correlation between those in charge of the placement tests on the one hand and the students and teachers on the other; in spite of time tables, university bulletins, and other printed matter bearing on the subject, many of the students, advisers, and instructors did not realize that such placement was mandatory and not optional. Another stumbling block in the way of proper classification was the conflict between the assigned language course and a required course in another subject. And a third cause for lack of a more perfect operation of the plan was the system of prerequisites for certain language courses. We are glad to report that there was a great reduction of these irregular cases in the fall of 1932 and that of 1933 showing that a close adjustment to the new scheme is finally being made. It is worthy of our attention to note in Table 3 that of the 108 students who were held stationary, or as normal, regardless

of the tests, 82, or about 76 per cent, made A's and B's, which is eloquent testimony to the fact that these students could have, without doubt, done more advanced work instead of marking time for a semester in relatively easy courses. In the second place, it is obvious that, of the 83 who were advanced without justification, 23, or about 28 per cent, made unsatisfactory grades as against only 17, or about 4 per cent, out of 427 who were advanced in accordance with the test (see Table 2).

II

The attainment examinations, known as the intermediate knowledge and proficiency examinations, are to be differentiated from the tests which we have just been discussing. According to the Fish Curriculum, students expecting to be graduated from Wisconsin with the A. B. degree in June, 1934, or thereafter had to meet the language requirements by passing either an intermediate reading knowledge test in two different languages or a proficiency examination in one language. The former requirement in foreign languages was met by the accumulation of 32 credits wholly earned in college or partly earned in school and partly in college. While the successful passing of either of these two kinds of examinations does not reduce the total number of credits necessary for graduation, it does permit the student to take an elective subject in place of the required one and hence offers greater flexibility of program to the abler and more industrious type. It ought to be said in passing that the new Fish curriculum already referred to makes provision for attainment examinations in other subjects than foreign languages: for instance, in the natural sciences such as physics, chemistry, and biology, and also in mathematics, history, and English. However, the foreign languages have furnished thus far the basis for the policy of emphasis on achievement rather than on the accumulation of credits, not by virtue of any inherent superiority in this respect over their sister subjects but because of the findings of earlier research by those connected with the Modern Foreign

Language Study and by other investigators which paved the way for some of the cardinal educational principles in Wisconsin's new curriculum. Action taken by the faculty of the College of Letters and Science last December and by the University faculty last January makes the language attainment examinations optional. It was agreed by the faculties that "authorization to substitute prescribed language credits for passing proficiency or intermediate examinations shall terminate when the system of comprehensive examinations in the major is put into general operation."

A questionnaire dealing with the foreign language requirements for entrance and graduation was sent out in August, 1928, by Professor H. C. Berkowitz, secretary of our Language and Literature Conference, to about 115 representative institutions throughout the country. In reply to the question as to whether foreign language requirements were evaluated in terms of credits or attainment, it was learned that 29 state universities used the former system and 2 the latter; of the endowed colleges 46 employed the former and 13 the latter. In other words, 75 higher institutions were still basing their requirements on credits and 15 on attainment, the latter including some that exact only reading knowledge tests. The returns revealed, furthermore, that a good number were contemplating the adoption of an attainment objective. As to whether they required a comprehensive examination to determine satisfactory attainment, 16 replied in the affirmative and 61 in the negative, the affirmative including, through misinterpretation, the College Entrance Board Comprehensive Examination or else merely a reading knowledge test. In answer to the inquiry as to what they regarded as satisfactory attainment, outside of descriptive material referring to specific major courses or honor students, there were very few replies. It was quite obvious that most colleges had not yet reached the point of defining the term *achievement* as applied to languages. One important point, nevertheless, was brought out by Professor Berkowitz' Report, namely, that the University of Wisconsin would have to take the initiative, if any

changes were to be effected, and that it would receive moral support from many quarters.

After many deliberations of the representatives of the various departments concerned and of the Language and Literature Conference from the spring of 1928 to that of 1930 the following restatement of the foreign language requirement was finally formulated and incorporated in the new curriculum and the university bulletin:

1. The foreign language requirement for the B.A. degree shall be met by proving (a) proficiency ("advanced knowledge") in a single language, or (b) intermediate knowledge ("reading knowledge") in two languages, ancient or modern.

2. *Proficiency* in a modern language shall be shown by demonstrating (a) adequate comprehension of representative passages from classic and modern authors, which may include matter taken from the student's major field, (b) the ability to understand and pronounce simple phrases in the spoken language, and (c) some knowledge of the history of literature and culture of the foreign people.

3. *Intermediate Knowledge* of a modern language shall be shown by a test involving the ability to pronounce the modern language and to interpret, adequately, modern prose of average difficulty.

4. *Proficiency* in Greek or Latin shall be shown by demonstrating (a) the ability to translate into idiomatic English representative passages of prose and poetry from the fields of the student's previous reading, which shall be substantially equivalent to the satisfactory completion of four years of the language in high school and four semesters in the university, or a similar amount differently distributed, (b) *some* knowledge of each author's work as a whole and of its historical and cultural background, (c) the ability to translate English sentences involving the common grammatical constructions in Greek or Latin prose.

5. *Intermediate Knowledge* in Greek or Latin shall be shown by demonstrating the ability to translate adequately and explain the grammatical constructions in passages of average difficulty chosen from such portions of at least three Greek or Latin authors as are usually read in high school or college.

The *intermediate* ("reading knowledge") examination in French consists of five parts and lasts about two hours: (a)

a vocabulary test based on the Vander Beke *French Word Book* published by Macmillan, (b) an idiom test based on the Cheydleur *French Idiom List* also published by Macmillan, (c) the translation of underscored parts of one or more modern prose selections, (d) a silent reading test with questions in French on the content to be answered in English—we have also used the multiple-type response in his part—and (e) a pronunciation test.

The *proficiency* ("advanced knowledge") examination in French consists of six parts and lasts about three and a quarter hours:

(a) Translation of two representative passages each from classical prose and poetry and one each from modern prose and poetry; two alternate selections to be offered in poetry (dramatic verse) of the 17th century.

(b) Translation of idioms incorporated in short sentences and graded as to difficulty, the same to be taken from the above *Idiom List*.

(c) Comprehensive questions on passages chosen from two modern authors. There are questions in French to be answered in English.

(d) An objective type of examination to test the general factual knowledge of French literature in the 17th, 18th, and 19th centuries.

(e) An essay-type question on the 17th, 18th, or 19th century to bring out appreciation of the principal literary movements, authors, or culture of these periods.

(f) An oral examination to require a fair understanding of spoken French and such speaking knowledge of French as might be expected of a student who has had one year of satisfactory drill in composition and conversation.

Space is lacking to describe more in detail these various types of examinations. It may be said, however, that the French, German, and Spanish intermediate forms are more or less of the new-type or objective kind, whereas the Latin and Italian are more of the traditional or essay-type. Thus far only 26 students have taken the intermediate examination in Italian, Norse, Hebrew, and Portuguese.

As set forth in Tables 4 and 5, there have been nine dif-

ferent administrations of these examinations since May, 1931, the plan being to give them in October, January, and May of each year. It will be noted that, of the 2,096 who took the intermediate forms, 1,371 or 65 per cent passed, and of the 290 who tried the proficiency forms 115 or only 40 per cent were successful. Before passing judgment on the apparent severity of these attainment examinations, it is very important to know that students who fail them do not lose the credits in the language courses that they have already taken and passed; these credits count towards graduation, but the students must pass either two intermediate examinations or one proficiency examination before they can use them for the A. B. degree. It is also very important to bear in mind that these examinations were designed to replace the former requirement of 32 credits in foreign languages for the bachelor of arts degree and to force the student more or less to concentrate on acquiring a reading knowledge of two foreign languages or a proficiency knowledge of one. Under the former plan students often scattered their efforts over three or four languages without significant achievement in any.

A brief interpretation of the summary of results of the intermediate and proficiency examinations as presented in Tables 4 and 5 may help to understand their value and significance. Normally under the old scheme a student would have to take 4 credits of foreign language for 8 semesters in order to earn 32 credits to graduate. Under the new scheme he may prepare in class or outside of class, at home, or abroad. Taking the former plan as the basis of operation, it will be observed in Table 4 that, of the 848 students who had 4 semesters or 16 credits of preparation (the estimated amount of time and credits required by the average student to be ready for the intermediate examination), 617 or 73 per cent of them passed. It is also to be remarked that 6 students with one semester, 152 with two semesters, and 412 with three semesters of preparation—i.e., 570 in all—saved 734 semesters or 2,936 credits in language study. On the other hand, 13 with one semester, 153 with two semesters, and 260 with three semesters, while not losing credits earned towards

TABLE 4

Summaries of the First Nine Administrations of the Intermediate Knowledge French, German, Spanish, Latin, Italian, Portuguese, and Norse Examinations at the University of Wisconsin from May, 1931, through January, 1934, Showing the Amount of Preparation in Terms of College Semesters and the Number of Passed and Failed at Each Level. (Two semesters of high school are estimated as equal to one of college.)

| Sem. | French | | | German | | | Spanish | | | Latin* | | | Total | | |
|-----------------------|--------|------|-------|--------|------|-------|---------|------|-------|--------|------|-------|-------|------|-------|
| | Pass | Fail | Total | Pass | Fail | Total | Pass | Fail | Total | Pass | Fail | Total | Pass | Fail | Total |
| 1 | .. | 3 | 3 | 6 | 8 | 14 | .. | .. | .. | 2 | 2 | 4 | 6 | 13 | 19 |
| 2 | 41 | 52 | 93 | 84 | 64 | 148 | 20 | 29 | 49 | 7 | 8 | 15 | 152 | 153 | 305 |
| 3 | 182 | 78 | 260 | 138 | 104 | 242 | 75 | 59 | 134 | 17 | 19 | 36 | 412 | 260 | 672 |
| 4 | 302 | 80 | 382 | 159 | 51 | 210 | 83 | 47 | 130 | 73 | 53 | 126 | 617 | 231 | 848 |
| 5 | 56 | 17 | 73 | 24 | 7 | 31 | 9 | 15 | 24 | 12 | 2 | 14 | 101 | 41 | 142 |
| 6 | 26 | 9 | 35 | 13 | 4 | 17 | 6 | 1 | 7 | 7 | 2 | 9 | 52 | 16 | 68 |
| 7 | 9 | 2 | 11 | .. | .. | .. | .. | 1 | 1 | 2 | 1 | 3 | 11 | 4 | 5 |
| 8 | 5 | .. | 5 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | 7 | .. | 7 |
| 9 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 |
| No formal training... | .. | .. | .. | 11 | 6 | 17 | .. | 1 | 1 | .. | .. | .. | 11 | 7 | 18 |
| Total..... | 623 | 241 | 864 | 435 | 244 | 679 | 193 | 153 | 346 | 120 | 89 | 207 | 1371 | 725 | 2096 |
| Per Cent... | 72% | 28% | .. | 64% | 36% | .. | 56% | 44% | .. | 58% | 42% | .. | 65% | 35% | .. |

* Includes 25 cases of Italian, Portuguese, and Norse which do not affect the relative per cent of pass and fail in Latin.

graduation, showed plainly that they had not yet reached the reading knowledge in one of the two languages required for the A.B. degree. Many of the students in this table have already passed two intermediate examinations and hence have fulfilled the requirements for their bachelor's degree.* A glance at the results of the proficiency examinations in Table 5 shows that 1 student saved 5 semesters, 13 saved 52 semesters, and so forth down through 16 students saved 16 semesters, i.e., 92 students cut down their language work by 217 semesters or 868 credits which could be used for electives if they so desired. Of the 175 who failed, 152 of them would not have met the old language requirements of 32 credits if they had offered only one language as they did here; hence, they have nothing to complain of in either case unless it be their inadequate preparation.

As we have already written on more than one occasion, the most significant aspects of these examinations are their educational and economic implications. A careful study of our

* To be exact about 178 students have fulfilled the language requirements for the A.B. by passing two intermediates and 115 have met them by passing the proficiency examination. Over 1,000 have passed either one-half of the A.B. requirements or all of the B.S. requirements.

TABLE 5

Summaries of the First Nine Administrations of the Proficiency French, German, Spanish, and Latin Examinations at the University of Wisconsin from May, 1931, through January, 1934, Showing the Amount of Preparation in Terms of College Semesters and the Number of Passed and Failed at Each Level. (Two semesters of high school are estimated as equal to one of college.)

| Sem. | French | | | German | | | Spanish | | | Latin | | | Total | | |
|------------|--------|------|-------|--------|------|-------|---------|------|-------|-------|------|-------|-------|------|-------|
| | Pass | Fail | Total | Pass | Fail | Total | Pass | Fail | Total | Pass | Fail | Total | Pass | Fail | Total |
| 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 2 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| 3 | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 |
| 4 | 11 | 13 | 24 | 1 | .. | 1 | 1 | 4 | 5 | .. | .. | .. | 13 | 17 | 30 |
| 5 | 19 | 32 | 51 | .. | .. | .. | 1 | 6 | 7 | .. | .. | .. | 20 | 38 | 58 |
| 6 | 29 | 63 | 92 | .. | 1 | 1 | 13 | 10 | 23 | .. | 1 | 1 | 42 | 75 | 117 |
| 7 | 15 | 20 | 35 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 16 | 20 | 36 |
| 8 | 13 | 19 | 32 | 7 | .. | 7 | 2 | 2 | 4 | .. | 2 | 2 | 22 | 23 | 45 |
| 9 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| Total..... | 89 | 148 | 237 | 8 | 2 | 10 | 17 | 22 | 39 | 1 | 3 | 4 | 115 | 175 | 290 |
| Per Cent.. | 38% | 62% | .. | 80% | 20% | .. | 44% | 56% | .. | 25% | 75% | .. | 40% | 60% | .. |

data for these three years' experience with the attainment examinations reveals that 662 students saved about 950 semesters or over 3,800 credits of study. Were this fully taken advantage of by the students, it would mean a saving of nearly \$27,000.00 in language instruction. Of course this economy is partly offset by those who continue the subject or fail. When this plan, however, is fully extended to the field of English, history, mathematics, biology, chemistry, and physics, as provided for in the new curriculum, there will be operating in this university a motivating pedagogical principle of primary importance joined with economy of time and operating expense of primary importance. This point cannot be overlooked or overemphasized, as it may be made one of the greatest educational forces on the campus. In fact, we believe that the Bureau of Guidance and Records of Wisconsin with its wide cooperative testing program and the foreign language departments with their use of placement and attainment examinations have shown real leadership in the history of education in this country, one that enhances the value of achievement by belittling time serving and the accumulation of frozen assets in the intellectual world.

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University of Wisconsin.

Report of the Committee on Graduate Instruction

ORIGIN AND PERSONNEL OF COMMITTEE

AFTER the publication of the second Handbook of American Universities and Colleges by the Council, there were several protests on the omission of various institutions under the description of facilities for graduate work. Only members of the Association of American Universities were included, inasmuch as no other official list of institutions offering graduate work was available. At its meeting October 7, 1932, the Executive Committee of the American Council appointed a Committee on Graduate Instruction as follows: R. M. Hughes, Chairman; Karl T. Compton, Virginia C. Gildersleeve, Frank B. Jewett, George Johnson, Charles B. Lipman, Albert D. Mead, John C. Merriam, Frank P. Graham, John L. Lowes, R. M. Hutchins, Henry Suzzallo, E. H. Wilkins. As it proved impossible for President Hutchins, President Graham, and Professor Lowes to serve at the time of the first meeting of the committee, Beardsley Ruml, W. W. Pierson and Hyder E. Rollins were appointed to the committee in the respective places of these men.

Two meetings of the committee were held in New York City, the first February 3, 1933, and the last January 11, 1934. At the first meeting six subjects for discussion were presented, referred to sub-committees, and reports prepared. Between meetings extensive work was carried forward and reported to the whole committee by mail, and at the last meeting all matters before the committee were reviewed and the final report as herewith submitted was approved.

The following subjects were considered:

1. Should an attempt be made to prepare a list of graduate schools offering adequate facilities for work in the various fields? If so, what procedure should be followed?

2. What organization should assume the duty of maintaining a record of all doctorates conferred?

3. Suggest the place and function of the Master's Degree.

4. Should there be a professional school for college teachers on the graduate level, other than the present graduate school? If so, what degree should be conferred?

5. Suggest the relationship of scientific instruction on the graduate level in a professional school to scientific instruction in the graduate school.

6. Suggest the most desirable and valuable relationship which should exist between institutions of research and graduate schools.

I

In preparing a list of graduate schools the following procedure was followed:

1. A list of 50 fields of knowledge in which it seemed possible to study the graduate work was prepared. The study as concluded covered only 35 fields.

2. A list of the 50 fields was sent to the Dean of the graduate school of every institution known to be offering work for the doctorate. The Dean was requested to check the fields in which graduate work for the doctorate was offered, to indicate the number of doctorates conferred in the last 5 years, and to submit a list of the graduate faculty in each field. The responses of the deans varied in accuracy and comprehensiveness.

3. From the reports of the deans, supplemented by study of catalogs, lists of institutions offering graduate work for the doctorate in each field, were prepared, complete so far as our information went.

4. The secretary of the national learned society in each field was requested to provide a list of 100 well-known scholars distributed, as far as possible, among the various special branches of the field.

5. To each of these scholars was sent a list of all the institutions offering work for the doctorate in the field with their

respective graduate staffs in the field. Each scholar was requested to check those institutions which in his judgment had an adequate staff and equipment to prepare candidate for the doctorate; and to star the departments of the high schools roughly the highest 20 per cent.

6. The returns from these scholars were summarized. Those institutions accorded a star by the majority vote were placed in the starred group; those checked by a majority but failing of a majority of stars, were placed in the non-starred group; those adequately staffed and equipped.

The report which follows is neither complete nor free of mistakes. It is, however, so far as it goes, a reliable guide to the judgment of a large group of our leading scholars relative to American graduate work.

The fields finally reported on are far from complete. They can be regarded as sub-fields of certain major fields. For example, Plant Pathology and Plant Physiology can be regarded as sub-fields of Botany. Others may be regarded as minor fields, offered by only a few institutions; e.g., Entomology, Soil Science, Anthropology, Aeronautical Engineering. If another similar study be made, it would be more valuable and could cover a more comprehensive list of fields.

There was marked evidence of a lag in the establishment of new departments. A department which has been strong, but which has lost good men and is really on the decline, has in many cases been rated too high. On the other hand, several departments that have recently developed much strength have been under-rated. If this type of study could be repeated every few years, such errors would be corrected.

Many votes on departments came in too late for final tabulations.

The results follow:

AERONAUTICAL ENGINEERING

49 ballots sent out.

36 returns; majority, 19 votes.

No doctorates were conferred in the period 1928-1932.

7 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Edward Eugene Aldrin, Joseph Sweetman Ames, Karl Arnstein, Harry Bateman, William A. Bevan, William Richards Blair, Charles Franklin Brooks, Frank Walker Caldwell, Charles Hugh Chatfield, Virginus Evans Clark, Walter Stuart Diehl, William Frederick Durand, Garland Fulton, Willis Ray Gregg, Leroy R. Grumman, George E. A. Hallett, Jerome Clarke Hunsaker, Carl V. Johnson, Wolfgang Benjamin Klemperer, Sydney Moses Kraus, Emory Scott Land, Charles Lanier Lawrence, Raymond Douglas MacCart, Charles Joseph McCarthy, Leslie McDill, George Jackson Mead, Max Michael Munk, Arthur Nutt, Edward Pearson Warner, Fred Ernest Weick, Albert Francis Zahm, Arthur Halstead, Robert Earl Johnson.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Aeronautical Engineering, starring those which it considers most distinguished:

* California Institute of Technology

* Massachusetts Institute of Technology

Stanford University

ANTHROPOLOGY

100 ballots sent out.

79 returns; majority, 40 votes.

31 doctorates were conferred in the period 1928-1932.

12 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Harriet Allyn, S. A. Barrett, Ralph L. Beals, Martha Warren Beckwith, Wendell C. Bennett, Frans Blom, Leonard Bloomfield, Franz Boas, Fay-Cooper Cole, John M. Cooper, C. H. Danforth, D. Sutherland Davidson, Frances Densmore, Roland B. Dixon, Vladimir J. Fowkes, Reo Fortune, Lawrence Foster, E. W. Gifford, Carl E. Guthe, George Herzog, F. W. Hodge, Harry Hoiyer, Earnest Albert Hooton, Walter Hough, Ales Hrdlicka, Melville Jacobs, Albert Ernest Jenks, Neil M. Judd, A. V. Kidder, Herbert W. Krieger, A. L. Kroeber, Ralph Linton, Robert H. Lowie, Ruth

Clarke MacKaye, William C. MacLeod, John Alden Mason, Philip A. Means, Truman Michelson, Warren K. Moorehead, George P. Murdock, Nels C. Nelson, Jesse L. Nusbaum, Ronald L. Olson, C. B. Osgood, Leonard Outhwaite, Elsie Clews Parsons, Vincent Petruccio, Hortense Powdermaker, A. R. Radcliffe-Brown, Robert Rodfield, Gladys A. Reichard, E. B. Renaud, F. H. H. Roberts, Jr., Helen H. Roberts, Townsend Russell, Edward Sapir, Frank M. Setzler, H. L. Shapiro, H. C. Shetrone, Harlan I. Smith, Frank G. Speck, Leslie Spier, H. J. Spinden, Matthew Stirling, John R. Swanton, Wingate Todd, A. M. Tozzer, George C. Vaillant, Wilson D. Wallis, Gene Weltfish, Leslie A. White, W. J. Wintemberg, Clark Wissler.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Anthropology, starring those which it considers most distinguished:

- | | |
|----------------------------|----------------------------|
| * Columbia University | * University of Chicago |
| * Harvard University— | University of Pennsylvania |
| Radcliffe College | University of Wisconsin |
| * University of California | * Yale University |

ANIMAL NUTRITION

53 ballots sent out.

42 returns; majority, 22 votes.

52 doctorates were conferred in the period 1928-1932.

9 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: C. E. Aubel, R. B. Becker, R. M. Bethke, G. Bohstedt, G. D. Buckner, C. Y. Cannon, W. E. Carroll, F. W. Christensen, C. C. Culbertson, R. A. Dutcher, H. B. Ellenberger, N. R. Ellis, E. B. Forbes, G. S. Fraps, J. A. Fries, R. A. Gortner, H. R. Guilbert, T. S. Hamilton, J. O. Halverson, E. B. Hart, A. G. Hogan, P. E. Howe, C. E. Howell, C. F. Huffman, C. H. Hunt, Max. Kriss, W. J. Loeffel, F. J. McClure, E. B. Meigs, R. C. Miller, H. H. Mitchell, F. B. Morrison, C. R. Moulton, F. B. Mumford, V. E. Nelson, W. B. Nevens, L. S. Palmer, A. C. Ragsdale, C. L. Shrewsbury, Jerry Sotola, B. H. Thomas, H. W. Titus, P. F. Trowbridge.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Animal Nutrition, starring those which it considers most distinguished:

- | | |
|----------------------------|---------------------------|
| * Cornell University | University of Illinois |
| Iowa State College | * University of Minnesota |
| Pennsylvania State College | University of Missouri |
| University of California | * University of Wisconsin |

ASTRONOMY

100 ballots sent out.

76 returns; majority, 39 votes.

38 doctorates were conferred in the period 1928-1932.

14 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: C. G. Abbot, Walter S. Adams, Dinsmore Alter, J. A. Anderson, L. B. Andrews, Harriet W. Bigelow, Nicholas T. Bobrovnikoff, S. L. Boothroyd, Benjamin Boss, F. P. Brackett, Lewis A. Brigham, Ernest W. Brown, Keivin Burns, Leon Campbell, W. W. Campbell, Annie J. Cannon, E. F. Carpenter, George C. Comstock, R. T. Crawford, C. H. Currier, H. D. Curtis, Raymond S. Dugan, John C. Duncan, O. L. Dustheimer, W. S. Eichelberger, Alice H. Farnsworth, E. A. Fath, Philip Fox, Edwin B. Frost, Caroline E. Furness, Henry G. Gale, C. H. Gingrich, Warren K. Green, Margaret Harwood, C. M. Huffer, Hamilton M. Jeffers, Alfred H. Joy, Arthur S. King, Michel S. Kovalenko, Oliver J. Lee, A. O. Leuschner, Frank B. Littell, Hazel M. Losh, Dean B. McLaughlin, Rev. Paul A. McNally, S.J., Allan D. Maxwell, D. H. Menzel, Willis I. Milham, John A. Miller, S. A. Mitchell, J. H. Moore, D. W. Morehouse, Herbert R. Morgan, F. R. Moulton, J. J. Nassau, Seth B. Nicholson, Charles P. Olivier, Cecilia H. Payne, Edison Pettit, John H. Pitman, Henry Norris Russell, Charles E. St. John, Jan Schilt, Frank Schlesinger, F. H. Seares, Harlow Shapley, B. W. Sitterly, Frederick Slocum, Charles H. Smiley, Harlan True Stotson, Otto Struve, G. Van Biesbroeck, W. H. Wright, Anne S. Young, Everett I. Yowell, Leah B. Allen.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Astronomy, starrng those which it considers most distinguished:

- | | |
|--------------------------|----------------------------|
| * Harvard University— | * University of California |
| Radcliffe College | * University of Chicago |
| Ohio State University— | * University of Michigan |
| Ohio Wesleyan University | University of Virginia |
| * Princeton University | Yale University |

BACTERIOLOGY

100 ballots sent out.

67 returns; majority, 34 votes.

154 doctorates were conferred in the period 191

37 institutions offered work for the doctora

Composite ratings were made from reports of the persons: S. Henry Ayres, Ira L. Baldwin, Stanho Jones, T. D. Beckwith, Anne G. Benton, George Robert S. Breed, James D. Brew, Jean Broadhurst fenbrenner, Robert E. Buchanan, L. D. Bushnell, Iron, W. Mansfield Clark, Arthur F. Coca, Barn H. J. Conn, D. J. Davis, Alice C. Evans, Carl Moyer S. Fleisher, Edwin B. Fred, F. P. Gay, W. J. E. Greaves, W. A. Hagan, Ivan C. Hall, B. W. E. G. Hastings, Ludvig Hektoen, Arthur T. Her Hitchner, Edwin O. Jordan, A. I. Kendall, S. A. F. Levine, Charles B. Lipman, Jacob G. Lipman, V. Manwaring, Ralph R. Mellon, Karl F. Meyer Mohler, Stuart Mudd, J. M. Neill, John F. Nov Novy, S. C. Prescott, L. F. Rettger, T. W. Riv Rogers, Walter G. Sackett, J. M. Sherman, Nob wood, Laetitia M. Snow, Joel A. Sperry, R. S. Sp Tanner, P. A. Tetrault, Ralph P. Tittsler, John S. A. Waksman, George H. Weaver, C. E. A. Win Zinsser.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Bacteriology, stating which it considers most distinguished:

| | |
|----------------------------|----------------------------|
| Columbia University | * University of California |
| * Cornell University | * University of Chicago |
| * Harvard University— | University of Illinois |
| Radcliffe College | * University of Michigan |
| * Iowa State College | University of Minnesota |
| * Johns Hopkins University | University of Pennsylvania |
| Michigan State College | * University of Wisconsin |
| Northwestern University | Washington University |
| Stanford University | * Yale University |

BOTANY

100 ballots sent out.

63 returns; majority, 32 votes.

274 doctorates were conferred in the period 1928-1932.

45 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: LeRoy Abrams, Charles Elmer Allen, Charles O. Appleman, E. B. Babcock, L. H. Bailey, Harley Harris Bartlett, Ernst A. Bessey, Albert F. Blakeslee, Henry Luke Bolley, William L. Bray, John T. Buchholz, Edward A. Burt, Charles Joseph Chamberlain, W. C. Coker, Guy N. Collins, William Crocker, Bradley M. Davis, Lyster H. Dewey, Bernard O. Dodge, B. M. Duggar, Arthur J. Eames, E. M. East, J. H. Faull, Margaret C. Ferguson, M. L. Fernald, H. M. Fitzpatrick, William Francis Canong, Rodney B. Harvey, Marshall Avery Howe, H. S. Jackson, Edward Charles Jeffrey, W. L. Jepson, Duncan S. Johnson, D. F. Jones, K. F. Kellerman, E. J. Kraus, I. F. Lewis, Burton E. Livingston, Francis E. Lloyd, Elmer D. Merrill, George T. Moore, David M. Mottier, G. E. Nichols, C. R. Orton, James Bertram Overton, George J. Peirce, Raymond J. Pool, Francis Ramaley, Donald Reddick, Howard S. Reed, William J. Robbins, Benjamin Lincoln Robinson, Karl Sax, John H. Schaffner, William A. Stechell, H. L. Shantz, Lester W. Sharp, G. H. Shull, Gilbert M. Smith, H. A. Spoehr, F. L. Stevens, William S. Cooper, Henry Chandler Cowles.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Botany, starring those which it considers most distinguished:

- | | |
|----------------------------|------------------------------|
| * Columbia University | * University of California |
| * Cornell University | * University of Chicago |
| Duke University | University of Illinois |
| * Harvard University— | University of Iowa |
| Radcliffe College | * University of Michigan |
| Indiana University | University of Minnesota |
| Iowa State College | University of Missouri |
| Johns Hopkins University | University of Nebraska |
| Michigan State College | University of North Carolina |
| Ohio State University | University of Pennsylvania |
| Pennsylvania State College | University of Texas |
| Purdue University | University of Washington |
| Rutgers University | * University of Wisconsin |
| Stanford University | * Washington University |
| Syracuse University | Yale University |
| University of Arizona | |

CHEMICAL ENGINEERING

25 ballots sent out.

21 returns; majority, 11 votes.

133 doctorates were conferred in the period 1928-1932.

18 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: W. L. Badger, Edward Bartow, Harry A. Curtis, B. F. Dodge, A. W. Gauger, R. T. Haslam, J. B. Hill, A. W. Hixson, H. E. Howe, W. N. Jones, D. B. Keyes, S. D. Kirkpatrick, C. A. Mann, Harry McCormack, A. B. Newman, H. C. Parmelee, W. P. Ryan, O. R. Sweeney, W. R. Veazey, E. R. Weidlein, A. H. White.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Chemical Engineering, starting those which it considers most distinguished:

| | |
|-----------------------------------------|--------------------------|
| California Institute of Technology | Ohio State University |
| * Columbia University | * University of Michigan |
| Iowa State College | University of Minnesota |
| * Massachusetts Institute of Technology | University of Wisconsin |
| | Yale University |

CHEMISTRY

103 ballots sent out.

63 returns; majority, 32 votes.

1,434 doctorates were conferred in the period 1928-1932.

67 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: L. H. Adams, Roger Adams, Edward Bartow, H. K. Benson, E. M. Billings, William Blum, Marston T. Bogert, L. W. Bosart, J. M. Braham, Benjamin T. Brooks, C. A. Browne, H. P. Cady, Frank K. Cameron, E. J. Crane, H. A. Curtis, Frank B. Dains, G. J. Esselen, William Lloyd Evans, A. C. Fieldner, George Shannon Forbes, F. C. Frary, R. A. Gortner, Carl Haner, R. T. Haslam, Joel H. Hildebrand, Arthur E. Hill, Paul E. Howe, M. H. Ittner, John Johnston, Donald B. Keyes, Frederick G. Keyes, S. C. Lind, H. S. Lukens, Ralph H. McKee, William McPherson, J. H. Mathews, Thomas Midgley, Jr., Carl S. Miner, C. E. Munroe, James F. Norris, Arthur A. Noyes, William A. Noyes, Mary E. Pennington, Charles L. Reese, E. Emmet Reid, Allen Rogers, R. E. Rose, A. H. Sabin, B. E. Schaar, Herman

Schlundt, H. C. Sherman, Alexander Silverman, Robert B. Sosman, Julius Stieglitz, Maximillian Toch, E. W. Washburn, E. R. Weidlein, H. B. Weiser, Gerald L. Wendt, F. C. Whitmore, W. R. Whitney, Edward Wicher, H. H. Willard.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Chemistry, starring those which it considers most distinguished:

| | |
|-----------------------------------------|------------------------------|
| Brown University | * University of California |
| * California Institute of Technology | * University of Chicago |
| * Columbia University | University of Cincinnati |
| * Cornell University | University of Colorado |
| Duke University | * University of Illinois |
| * Harvard University— | University of Iowa |
| Radcliffe College | University of Kansas |
| Indiana University | * University of Michigan |
| Iowa State College | * University of Minnesota |
| * Johns Hopkins University | University of Missouri |
| * Massachusetts Institute of Technology | University of Nebraska |
| New York University | University of North Carolina |
| Northwestern University | University of Notre Dame |
| * Ohio State University | University of Pennsylvania |
| Pennsylvania State College | University of Pittsburgh |
| * Princeton University | University of Virginia |
| Rice Institute | University of Washington |
| * Stanford University | * University of Wisconsin |
| | Western Reserve University |
| | * Yale University |

CIVIL ENGINEERING

100 ballots sent out.

48 returns; majority, 25 votes.

15 doctorates were conferred in the period 1928-1932.

19 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: T. R. Agg, O. H. Ammann, H. G. Balcom, C. H. Birdseye, E. B. Black, O. S. Bowen, William Bowie, Lincoln Bush, Jay Downer, H. P. Eddy, A. H. Fuller, George W. Fuller, W. E. Fuller, H. J. Gilkey, A. T. Goldbeck, N. C. Grover, A. J. Hammond, L. G. Holleran, W. W. Horner, R. E. Horton, G. L. Hosmer, Otis E. Hovey, J. C. Hoyt, Prevost Hubbard, Joseph Jacobs, C. T. Johnston, G. W. Kirtledge, C. W. Kutz, C. T. Leeds, H. M. Lewis, J. B. Lippin-

cott, Hunter McDonald, F. R. McMillan, Gerard H. Matthes, Ralph Modjeski, Clyde T. Morris, R. L. Morrison, H. deB. Parsons, Langdon Pearse, H. E. Riggs, F. E. Schmitt, C. M. Spofford, D. B. Steinman, G. F. Syme, F. E. Turneure, J. A. L. Waddell.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Civil Engineering, starring those which it considers most distinguished:

| | |
|-----------------------------------------|----------------------------------|
| California Institute of Technology | Purdue University |
| Columbia University | Rensselaer Polytechnic Institute |
| * Cornell University | University of California |
| Harvard University | * University of Illinois |
| Iowa State College | University of Iowa |
| Johns Hopkins University | University of Minnesota |
| * Massachusetts Institute of Technology | University of Pennsylvania |
| | University of Wisconsin |

CLASSICS

99 ballots sent out.

65 returns; majority, 34 votes.

153 doctorates were conferred in the period 1928-1932.

38 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: J. T. Allen, Allan P. Ball, W. J. Battle, C. H. Bee-son, Lillian Gay Berry, Campbell Bonner, Ella Bourne, Carroll M. Brown, H. E. Burton, George M. Calhoun, Henry L. Crosby, Francis P. Donnelly, S. J., F. S. Dunham, Emily H. Dutton, B. L. D'Ooge, Tenney Frank, Clarence W. Gleason, Wren Jones Grinstead, John F. Gummere, Richard M. Gummere, George D. Hadzsits, Elizabeth H. Haight, Karl P. Harrington, Victor D. Hill, George Howe, Arthur L. Keith, Sherman Kirk, Casper J. Kraemer, Lillian B. Lawler, Helen H. Law, Herbert C. Lipscombe, Louis E. Ford, Katharine Lummis, Nelson G. McCrea, William S. Messer, Frank J. Miller, Walter Miller, H. C. Nutting, William A. Oldfather, Clyde Pharr, P. O. Place, H. W. Prescott, Edward K. Rand, Ernst Riess, Dwight N. Robinson, D. M. Robinson, Frances E. Sabin, Evan T. Sage, Henry A. Sanders, Harry F. Scott, William T. Semple, Grant Showerman, Charles N. Smiley, Duane R. Stuart, Helen H. Tanzer, Eugene Tavenner, Harold G. Thompson, B. L. Ullman, A. T. Walker, Andrew F. West,

Monroe N. Wetmore, G. M. Whicher, Dorrance S. White, Horace W. Wright, Clarence H. Young.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Classics, starring those which it considers most distinguished:

| | |
|--------------------------------|------------------------------|
| Bryn Mawr College | * University of California |
| Catholic University of America | * University of Chicago |
| * Columbia University | University of Cincinnati |
| Cornell University | University of Illinois |
| * Harvard University— | University of Iowa |
| Radcliffe College | * University of Michigan |
| * Johns Hopkins University | University of North Carolina |
| New York University | * University of Pennsylvania |
| Northwestern University | University of Wisconsin |
| Ohio State University | Washington University |
| * Princeton University | Western Reserve University |
| Stanford University | * Yale University |

ECONOMICS

100 ballots sent out.

61 returns; majority, 31 votes.

535 doctorates were conferred in the period 1928-1932.

53 institutions offered work for doctorate.

Composite ratings were made from reports of the following persons: James W. Angell, George E. Barnett, J. W. Bell, A. B. Berglund, Roy G. Blakey, E. L. Bogart, O. F. Bouche, F. A. Bradford, T. N. Carver, J. M. Clark, Clive Day, F. S. Deibler, Paul Douglas, F. A. Fetter, Irving Fisher, F. B. Garver, Carter Goodrich, C. E. Griffin, M. B. Hammond, Alvin Hansen, C. D. Hardy, B. H. Hibbard, H. E. Hoagland, Grover G. Huebner, John Ise, Jens Jensen, Eliot Jones, Edwin Kemmerer, James E. LeRossignol, H. L. Lutz, David McCabe, H. A. Millis, Broadus Mitchell, Wesley C. Mitchell, H. G. Moulton, C. T. Murchison, E. G. Nourse, E. M. Patterson, Carl Plohn, C. O. Ruggles, W. A. Scott, Horace Secrist, S. H. Slichter, T. R. Snavely, W. E. Spahr, R. A. Stevenson, G. W. Stocking, Frank P. Stockton, H. C. Taylor, Jesse Tullock, Francis Tyson, Jacob Viner, G. S. Watkins, A. B. Wolfe.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for

work leading to the doctorate in Economics, starring those which it considers most distinguished:

- | | |
|----------------------------|------------------------------|
| Brown University | * University of Chicago |
| * Columbia University | University of Illinois |
| * Cornell University | University of Iowa |
| * Harvard University— | * University of Michigan |
| Radcliffe College | * University of Minnesota |
| Johns Hopkins University | University of Missouri |
| New York University | * University of Pennsylvania |
| Northwestern University | University of Texas |
| Ohio State University | University of Virginia |
| * Princeton University | * University of Wisconsin |
| Stanford University | * Yale University |
| * University of California | |

EDUCATION

73 ballots sent out.

54 returns; majority, 28 votes.

1300 doctorates were conferred in the period 1928-1932.

61 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Carter Alexander, John C. Almack, C. J. Anderson, George F. Arps, William C. Bagley, A. S. Barr, Bancroft Beatley, Harold Benjamin, Charles S. Berry, Boyde H. Bode, Thomas H. Briggs, W. A. Brownell, B. R. Buckingham, W. W. Charters, George S. Counts, Elwood P. Cubberley, Harl R. Douglass, James B. Edmonson, Walter Crosby Eells, Carl G. F. Franzen, S. C. Garrison, F. M. Garver, Arthur I. Gates, William S. Gray, E. Duncan Grizzell, M. E. Haggerty, C. M. Hill, Henry W. Holmes, Ernest Horn, H. G. Hullfish, Arthur J. Jones, Charles H. Judd, William W. Kemp, William H. Kilpatrick, Edgar W. Knight, Mark May, Walter S. Monroe, Paul R. Mort, C. E. Partch, L. M. Pechstein, William M. Proctor, F. W. Reeves, Raleigh Scharling, Robert F. Seybolt, Francis T. Spaulding, George D. Stoddard, Fletcher W. Swift, P. M. Symonds, Edward L. Thorndike, M. R. Trabue, William Clark Trow, John W. Withers, Clifford Woody, Thomas Woody.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Education, starring those which it considers most distinguished:

| | |
|--------------------------------------------|--------------------------------------|
| Boston University | University of Illinois |
| * Columbia University | * University of Iowa |
| Cornell University | University of Kansas |
| George Peabody College for Teachers | * University of Michigan |
| * Harvard University— Radcliffe College | * University of Minnesota |
| Indiana University | University of Missouri |
| Johns Hopkins University | University of Nebraska |
| New York University | University of North Carolina |
| Northwestern University | University of Pennsylvania |
| * Ohio State University | University of Pittsburgh |
| Pennsylvania State College | University of Southern California |
| * Stanford University | University of Texas |
| * University of California | University of Washington |
| * University of Chicago | University of Wisconsin |
| University of Cincinnati | * Yale University |

ELECTRICAL ENGINEERING

36 ballots sent out.

24 returns; majority, 13 votes.

55 doctorates were conferred in the period 1928-1932.

22 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: J. A. Correll, P. H. Daggett, R. E. Doherty, H. E. Dyche, O. W. Esbach, H. S. Evans, O. J. Ferguson, O. F. Harding, D. C. Jackson, F. E. Johnson, Vladimir Karapetoff, A. E. Kennelly, A. S. Langsdorf, M. B. Long, A. H. Lovell, C. E. Magnusson, R. A. Millikan, E. B. Roberts, W. S. Rodman, W. I. Slichter, F. C. Stockwell, F. E. Terman, J. W. Whitehead, W. E. Wickenden.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Electrical Engineering, stating those which it considers most distinguished:

| | |
|--------------------------------------------|----------------------------|
| * California Institute of Technology | Purdue University |
| Columbia University | Stanford University |
| Cornell University | University of California |
| Harvard University | University of Michigan |
| * Johns Hopkins University | University of Pennsylvania |
| * Massachusetts Institute of Technology | University of Wisconsin |
| | Yale University |

ENGLISH

100 ballots sent out.

69 returns; majority, 35 votes.

603 doctorates were conferred in the period 1928-1932.

49 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Charles R. Baskervill, Albert C. Baugh, Joseph W. Beach, Arthur Beatty, Henry M. Belden, C. V. Boyer, Louis I. Bredvold, C. F. Tucker Brooke, A. C. L. Brown, Carleton Brown, William F. Bryan, Philo M. Buck, Jr., Edwin B. Bur- gum, Clarence G. Child, George R. Coffman, Lane Cooper, Hardin Craig, Lindsay T. Damon, John W. Draper, Norman Foerster, James Holly Hanford, George McLean Harper, Karl J. Holzknecht, Jay B. Hubbell, Merritt Y. Hughes, Percival Hunt, Sigurd B. Hustvedt, W. H. Irving, William S. Johnson, Howard M. Jones, Alexander C. Judson, Arthur G. Kennedy, Henning Larsen, Robert A. Law, Laura Hibbard Loomis, John L. Lowes, Roger P. McCutcheon, Kemp Ma- lone, Baldwin Maxwell, K. B. Murdock, John T. Murray, Robert S. Newdick, Clark S. Northrup, Charles D. Osgood, Frederick M. Padelford, Louise Pound, James W. Rankin, T. M. Raysor, Hyder E. Rollins, Robert K. Root, Arthur Hobson Quinn, Felix E. Schelling, Robert Shafer, Edgar F. Shannon, George W. Sherburn, Franklin D. Snyder, J. W. Spargo, Hazelton Spencer, Elmer E. Stoll, J. S. P. Tatlock, Alwin Thaler, Frederick Tupper, Louis Wann, Stanley Wil- liams, James S. Wilson, Karl Young, Jacob Zeitlin.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in English, starring those which it considers most distinguishing:

| | |
|----------------------------|------------------------------|
| Bryn Mawr College | University of Cincinnati |
| * Columbia University | University of Illinois |
| Cornell University | University of Iowa |
| Duke University | * University of Michigan |
| * Harvard University— | University of Minnesota |
| Radcliffe College | University of Missouri |
| Indiana University | University of Nebraska |
| * Johns Hopkins University | University of North Carolina |
| New York University | University of Pennsylvania |
| Northwestern University | University of Texas |
| * Princeton University | University of Washington |
| Stanford University | University of Wisconsin |
| * University of California | Western Reserve University |
| * University of Chicago | * Yale University |

ENTOMOLOGY

95 ballots sent out.

73 returns; majority, 37 votes.

99 doctorates were conferred in the period 1928-1932.

23 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Chas. F. Adams, J. M. Aldrich, C. P. Alexander, W. J. Baerg, A. C. Baker, H. G. Barber, H. S. Barber, F. C. Bishopp, J. Chester Bradley, W. E. Britton, C. T. Brues, A. F. Burgess, Philip P. Calvert, P. W. Claassen, C. W. Collins, R. A. Cooley, Ernest N. Cory, C. H. Curran, John J. Davis, George A. Dean, R. W. Doane, Carl J. Drake, E. O. Essig, Henry E. Ewing, E. P. Felt, G. F. Ferris, J. W. Folsom, S. B. Fracker, T. H. Frison, William D. Funkhouser, A. B. Gahan, C. P. Gillette, William B. Herms, W. E. Hinds, L. O. Howard, O. A. Johannsen, C. H. Kennedy, H. H. Knight, W. H. Larrimer, F. H. Lathrop, P. B. Lawson, George M. List, Philip Luginbill, Frank E. Lutz, W. L. McAtee, J. McDunnough, W. S. Marshall, Robert Matheson, C. L. Metcalf, Z. P. Metcalf, Clarence E. Mickel, J. G. Needham, Walter C. O'Kane, Herbert Osborn, R. C. Osborn, P. J. Parrott, H. M. Parshley, Edith M. Patch, L. M. Peairs, Charles H. Richardson, S. A. Rohwer, H. C. Severin, J. M. Swaine, P. S. Welch, Walter H. Wellhouse, H. N. Worthley, H. J. Quayle.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Entomology, starring those which it considers most distinguished:

- | | |
|-------------------------|---------------------------|
| * Cornell University | Rutgers University |
| * Harvard University— | Stanford University |
| Radcliffe College | University of California |
| * Iowa State College | University of Illinois |
| Kansas State College | University of Kansas |
| Massachusetts State | University of Michigan |
| College | * University of Minnesota |
| * Ohio State University | University of Wisconsin |

FINE ARTS

56 ballots sent out.

28 returns; majority, 15 votes.

21 doctorates were conferred in the period 1928-1932.

11 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Alice V. Brown, Edward Capps, Jr., George H. Chase, Kenneth J. Conant, Walter Cook, Ernest Diez, William B. Dinsmore, George Edgell, George W. Elderkin, Helen Gardner, Blake-More Godwin, Stephen V. Grancsay, Clarence Kennedy, Fiske Kimball, Frank J. Mather, Arthur McCombs, A. P. McMahon, Arthur Upham Pope, Chandler Post, Edward W. Root, James J. Rorimer, Michael Rostovtzeff, Meyer Schapiro, John Shapely, E. Baldwin Smith, Emerson H. Swift, Mary Hamilton Swindler, Clarence Ward.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Fine Arts, starring those which it considers most distinguished:

| | |
|--------------------------|------------------------|
| * Bryn Mawr College | New York University |
| * Harvard University— | * Princeton University |
| Radcliffe College | University of Chicago |
| Johns Hopkins University | |

GENETICS

100 ballots sent out.

64 returns; majority, 33 votes.

69 doctorates were conferred in the period 1928-1932.

22 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Charles E. Allen, Edgar Anderson, H. H. Bartlett, H. E. Brewbaker, J. T. Buchholz, L. L. Burlingame, W. E. Castle, Ralph E. Cleland, G. N. Collins, C. H. Danforth, Bradley M. Davis, D. W. Davis, Milislav Demerec, Leslie C. Dunn, E. M. East, Margaret C. Ferguson, Allan C. Fraser, R. J. Garber, W. H. Gates, Hubert D. Goodale, John W. Gowen, Fred Griffiee, M. F. Guyer, George Haines, F. B. Hanson, Herbert K. Hayes, Frank A. Hays, A. H. Hersh, S. J. Holmes, Heman L. Ibsen, F. R. Immer, Merle T. Jenkins, Donald F. Jones, James P. Kelly, Helen Dean King, Walter Landauer, J. W. Lesley, E. W. Lindstrom, C. C. Little, Jay L. Lush, E. Carlton MacDowell, P. C. Mangels-

dorf, Charles W. Metz, Hermann J. Muller, H. H. Newman, Clarence P. Oliver, T. S. Painter, J. T. Patterson, Fernandus Payne, Raymond Pearl, Harold H. Plough, F. D. Richey, Oscar Riddle, Karl Sax, Franz Schrader, A. Franklin Shull, George H. Shull, L. J. Stadler, David H. Thompson, D. C. Warren, Bruce L. Warwick, Emil Witchi, C. M. Woodworth.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Genetics, starring those which it considers most distinguished:

| | |
|--------------------------------------|---------------------------|
| * California Institute of Technology | University of Chicago |
| Columbia University | University of Illinois |
| * Cornell University | University of Michigan |
| * Harvard University— | University of Minnesota |
| Radcliffe College | University of Missouri |
| Iowa State College | University of Pittsburgh |
| Johns Hopkins University | * University of Texas |
| Princeton University | * University of Wisconsin |
| * University of California | Washington University |

GEOGRAPHY

71 ballots sent out.

56 returns; majority, 29 votes.

58 doctorates were conferred in the period 1928-1932.

18 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: John B. Appleton, W. W. Atwood, Nels A. Bengtson, Charles F. Brooks, Ralph H. Brown, Robert M. Brown, Kirk Bryan, William T. Chambers, Charles C. Colby, W. S. Cooper, Darrell H. Davis, W. M. Davis, Richard E. Dodge, Stanley D. Dodge, W. Elmer Ekblaw, Nevin M. Fenneman, V. C. Finch, Robert Burnett Hall, Roland M. Harper, Richard Hartshorne, W. H. Hobbs, J. W. Hoover, George D. Hubbard, Preston E. James, Mark Jefferson, W. L. G. Joerg, Douglas W. Johnson, Wellington D. Jones, Clarence F. Jones, Fred B. Kniffen, John Barger Leighly, A. K. Lobeck, George McBride, Kenneth C. McMurry, George J. Miller, J. E. Orchard, Almon E. Parkins, Roderick Peattie, Robert S. Platt, George T. Renner, Jr., Richard Joel Russell, Carl O. Sauer, H. L. Shantz, Guy-Harold Smith, Griffith Taylor, Lewis F. Thomas, Walter S. Tower, Glenn T. Trewartha, Eugene Van Cleef, Stephen S. Visher, Oscar Diedrich Von

Engeln, R. H. Whitbeck, Charles Langdon White, D. S. Whittlesey, Frank E. Williams, Frank James Wright.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Geography, starring those which it considers most distinguished:

- | | |
|-----------------------|----------------------------|
| * Clark University | * University of California |
| Columbia University | * University of Chicago |
| Harvard University— | University of Cincinnati |
| Radcliffe College | University of Michigan |
| Ohio State University | * University of Wisconsin |

GEOLOGY

105 ballots sent out.

68 returns; majority, 35 votes.

251 doctorates were conferred in the period 1928-1932.

39 institutions offered work for the doctorates.

Composite ratings were made from reports of the following persons: William C. Alden, George H. Ashley, Wallace W. Atwood, H. Foster Bain, Florence Bascom, Ray S. Bassler, Edson S. Bastin, Alan M. Bateman, William S. Bayley, Edward W. Berry, Eliot Blackwelder, N. L. Bowen, William Bowie, Isaiah Bowman, W. H. Bucher, Bert S. Butler, Ermine C. Case, Rollin T. Chamberlin, Charles H. Clapp, Herdman F. Cleland, Edgar R. Cumings, Reginald A. Daly, Nelson H. Darton, E. L. De Golyer, Herman L. Fairchild, J. J. Galloway, Louis C. Graton, Frank F. Grout, Donnel F. Hewett, William O. Hotchkiss, Albert Johannsen, Douglas Johnson, George F. Kay, Adolph Knopf, Frederic H. Lahee, Alfred C. Lane, Morris M. Leighton, Waldemar Lindgren, Armin K. Lobeck, Chester R. Longwell, George D. Louderback, Edward B. Mathews, Warren J. Mead, W. C. Mendenhall, Herbert E. Merwin, Raymond C. Moore, Charles Palache, Alexander H. Phillips, Frederick L. Ransome, Percy E. Raymond, John B. Reeside, Jr., Heinrich Ries, Rudolf Ruedemann, William B. Scott, Elias H. Sellards, Hervey W. Shimer, George Otis Smith, George W. Stose, William H. Twenhofel, Edward O. Ulrich, F. R. Van Horn, T. Wayland Vaughan, Chester K. Wentworth, David White, A. N. Winchell, John E. Wolff, William E. Wrather, Frederick E. Wright.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Geology, starring those which it considers most distinguished:

- | | |
|-----------------------------------------|----------------------------|
| * California Institute of Technology | * University of California |
| * Columbia University | * University of Chicago |
| * Cornell University | University of Cincinnati |
| * Harvard University— | University of Illinois |
| Radcliffe College | University of Iowa |
| Indiana University | University of Kansas |
| * Johns Hopkins University | University of Michigan |
| * Massachusetts Institute of Technology | * University of Minnesota |
| * Princeton University | University of Missouri |
| * Stanford University | University of Oklahoma |
| | * University of Wisconsin |
| | * Yale University |

GERMAN

91 ballots sent out.

72 returns; majority, 37 votes.

995 doctorates were conferred in the period 1928-1932.

33 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Hermann B. Almstedt, Albert W. Aron, Leonard Bloomfield, Neil C. Brooks, Arthur Burkhard, Oscar Burkhard, Harry Caplan, William A. Cooper, George H. Danton, Robert W. Deering, Tobias J. C. Diekhoff, John W. Eaton, Ernest O. Eckelman, Berthold A. Eisenlohr, M. B. Evans, Erle Fairfield, Ernst Feise, Robert H. Fife, George T. Flom, Theodore Geissendoerfer, Paul G. Gleis, Chester N. Gould, James T. Hatfield, Edmund K. Heller, Harvey W. Hewitt-Thayer, Alexander R. Hohlfeld, Lee M. Hollander, John P. Hoskins, William G. Howard, Richard Jente, Ernst Jockers, Robert J. Kellogg, John L. Kind, Samuel Kroesch, Hans Kurath, William Kurrelmeyer, Warner Leopold, George F. Lussky, Herbert C. Lyte, Ernst H. Mensel, W. E. Metzenthin, Erwin T. Mohme, B. Q. Morgan, Paul R. Pope, Allen W. Porterfield, George M. Priest, Eduard Prokosch, J. F. L. Raschen, Walter A. Reichart, Kurt F. Reinhardt, Arthur F. J. Remy, E. C. Roedder, F. G. G. Schmidt, Carl F. Schreiber, Detlev W. Schumann, Daniel B. Shumway, Walter Silz, Taylor Starck, Lilian C. Stroebe, Archer Taylor, Henry C. Thurnau, Walter D. Toy, William D. Trautman, Bert J. Vos, E. K. J. H. Voss, Fred B. Wahr, John A. Walz, Hermann J. Weigand, Joseph Wiehr, Frederick H. Wilkens, Charles Bundy Wilson, Wesley D. Zinnecker.

The jury named above has by a majority vote approved the

following institutions as adequately staffed and equipped for work leading to the doctorate in German, starring those which it considers most distinguished:

| | |
|----------------------------|----------------------------|
| Bryn Mawr College | University of California |
| * Columbia University | * University of Chicago |
| Cornell University | University of Cincinnati |
| * Harvard University— | University of Illinois |
| Radcliffe College | University of Michigan |
| Indiana University | University of Minnesota |
| * Johns Hopkins University | University of Pennsylvania |
| New York University | University of Texas |
| * Northwestern University | * University of Wisconsin |
| Ohio State University | Washington University |
| Princeton University | * Yale University |
| Stanford University | |

HISTORY

98 ballots sent out.

59 returns; majority, 31 votes.

599 doctorates were conferred in the period 1928-1932.

55 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Randolph G. Adams, Frank M. Anderson, James F. Baldwin, Eugene C. Barker, James P. Baxter, Charles A. Beard, Samuel F. Bemis, A. E. R. Boak, Herbert E. Bolton, C. S. Boucher, Robert G. Caldwell, Avery O. Craven, Arthur L. Cross, Godfrey Davies, Eloise Ellery, Max Farrand, Sidney B. Fay, Dixon Ryan Fox, Tenney Frank, N. S. B. Gras, Rev. Peter Guilday, Joseph G. deR. Hamilton, Carlton J. H. Hayes, F. H. Hodder, Albert Hyma, J. Franklin Jameson, Waldo G. Leland, William E. Lingelbach, William E. Lunt, Albert H. Lybyer, Dumas Malone, Frederick Merk, William A. Morris, John U. Nef, Richard A. Newhall, Roy F. Nichols, Wallace Notestein, Laurence B. Packard, Dexter Perkins, Francis S. Philbrick, Ulrich B. Phillips, Bertha H. Putnam, Conyers Read, Thad W. Riker, Michael Rostovtsoff, Ferdinand Schevill, Arthur M. Schlesinger, Bernadotte E. Schmitt, George C. Sellery, James T. Shotwell, Preserved Smith, O. C. Stine, Leo F. Stock, James W. Thompson, Lynn Thorndike, Abbott P. Usher, Waldemar Westergaard, W. L. Westermann, James F. Willard.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in History, starring those which it considers most distinguished:

| | |
|--------------------------------|------------------------------|
| Brown University | Princeton University |
| Bryn Mawr College | Stanford University |
| Catholic University of America | * University of California |
| Clark University | * University of Chicago |
| * Columbia University | University of Illinois |
| * Cornell University | University of Iowa |
| Duke University | University of Kansas |
| * Harvard University— | * University of Michigan |
| Radcliffe College | University of Minnesota |
| Johns Hopkins University | University of North Carolina |
| New York University | * University of Pennsylvania |
| Northwestern University | University of Texas |
| Ohio State University | University of Wisconsin |
| | * Yale University |

HUMAN NUTRITION

56 ballots sent out.

33 returns; majority, 17 votes.

103 doctorates were conferred in the period 1928-1932.

18 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Walter C. Alvarez, Howard H. Beard, S. R. Benedict, Fritz E. Bischoff, W. R. Bloor, G. Davis Buckner, A. J. Carlson, McKeen Cattell, George R. Cowgill, Wm. H. Chambers, Amy L. Daniels, C. A. Elvehjem, R. A. Gortner, Fred R. Griffith, Jr., Harold M. Himwich, Fred A. Hitchcock, A. G. Hogan, Paul E. Howe, H. B. Lewis, Icie G. Macy, L. A. Maynard, L. B. Mendel, H. H. Mitchell, Agnes F. Morgan, John R. Murlin, V. E. Nelson, Ruth Okey, H. B. Pierce, Henry C. Sherman, A. H. Smith, Barnett Sure, Ruth Wheeler, R. M. Bethke.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Human Nutrition, starring those which it considers most distinguished:

| | |
|----------------------------|----------------------------|
| * Columbia University | University of Iowa |
| Cornell University | University of Missouri |
| Iowa State College | * University of Rochester |
| * Johns Hopkins University | * University of Wisconsin |
| University of California | Washington University |
| University of Chicago | Western Reserve University |
| University of Illinois | * Yale University |

MATHEMATICS

100 ballots sent out.

85 returns; majority, 43 votes.

329 doctorates were conferred in the period 1928-1932.

48 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: C. R. Adams, A. A. Albert, R. C. Archibald, Harry Bateman, A. A. Bennett, B. A. Bernstein, G. D. Birkhoff, H. F. Blichfeldt, G. A. Bliss, W. D. Cairns, B. H. Camp, R. D. Carmichael, A. F. Carpenter, W. B. Carver, E. W. Chittenden, Alonzo Church, A. B. Coble, J. L. Coolidge, D. R. Curtiss, H. T. Davis, L. E. Dickson, Jesse Douglas, Arnold Dresden, G. C. Evans, W. B. Fite, Tomlinson Fort, Philip Franklin, T. C. Fry, J. W. Glover, W. C. Graustein, L. M. Graves, W. L. Hart, Olive C. Hazlett, E. R. Hedrick, T. H. Hildebrandt, Einar Hille, T. R. Hollcroft, M. H. Ingraham, A. J. Kempner, J. R. Kline, E. P. Lane, R. E. Langer, Solomon Lefschetz, D. N. Lehmer, C. C. MacDuffee, W. D. MacMillan, H. W. March, W. E. Milne, C. N. Moore, Marston Morse, F. D. Murnaghan, Oystein Ore, Tibor Radó, R. G. D. Richardson, P. R. Rider, H. L. Rietz, J. F. Ritt, H. P. Robertson, W. H. Roever, F. R. Sharpe, J. A. Shohat, H. E. Slaughter, D. E. Smith, E. R. Smith, Virgil Snyder, M. H. Stone, E. B. Stouffer, D. J. Struik, J. D. Tamarkin, T. Y. Thomas, J. V. Uspensky, E. B. Van Vleck, Oswald Veblen, J. L. Walsh, J. H. M. Wedderburn, Anna P. Wheeler, G. T. Whyburn, D. V. Widder, Norbert Wiener, R. L. Wilder, K. P. Williams, W. A. Wilson.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Mathematics, starring those which it considers most distinguished:

- | | |
|-----------------------------------------|----------------------------|
| * Brown University | Rice Institute |
| Bryn Mawr College | Stanford University |
| California Institute of Technology | University of California |
| * Columbia University | * University of Chicago |
| Cornell University | University of Cincinnati |
| Duke University | * University of Illinois |
| * Harvard University— | University of Iowa |
| Radcliffe College | University of Michigan |
| Indiana University | University of Minnesota |
| Johns Hopkins University | University of Missouri |
| * Massachusetts Institute of Technology | University of Pennsylvania |
| Ohio State University | University of Texas |
| * Princeton University | University of Wisconsin |
| | Yale University |

MECHANICAL ENGINEERING

73 ballots sent out.

32 returns; majority, 17 votes.

15 doctorates were conferred in the period 1928-1932.

17 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: E. G. Bailey, C. P. Bliss, B. M. Brigman, H. W. Brooks, Nelson C. Brown, A. G. Christie, H. V. Coes, K. H. Condit, Karl T. Compton, Huber Ogilvie Croft, K. S. W. Davidson, S. W. Dudley, W. F. Durand, G. M. Eaton, A. M. Greene, Jr., G. B. Haven, E. C. Hutchinson, W. H. Kenerson, H. Kreisinger, A. S. Langsdorf, L. S. Marks, Erik Oberg, H. deB. Parsons, A. A. Potter, J. W. Roe, E. C. Schmidt, L. P. Sieg, M. C. Stuart, S. Timoshenko, L. W. Wallace, Roy V. Wright, G. A. Young.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Mechanical Engineering, starring those which it considers most distinguished:

- | | |
|-----------------------------------------|--------------------------|
| California Institute of Technology | * Purdue University |
| * Cornell University | Stanford University |
| Harvard University | University of California |
| Johns Hopkins University | University of Illinois |
| * Massachusetts Institute of Technology | University of Michigan |
| | Yale University |

MINING AND METALLURGICAL ENGINEERING

47 ballots sent out.

28 returns; majority, 15 votes.

41 doctorates were conferred in the period 1928-1932.

19 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: W. R. Appleby, J. W. Barker, Alan M. Bateman, H. M. Boylston, P. B. Bucky, M. F. Coolbaugh, Charles Laurence Dake, John F. Dodge, F. Leroy Foster, L. C. Graton, Carle R. Hayward, C. A. Heiland, E. A. Hersam, T. J. Hoover, W. O. Hotchkiss, Waldemar Lindgren, Charles E. Locke, D. A. Lyon, E. P. Mathewson, A. C. Noe, W. B. Plank, Frank H. Probert, Thomas T. Read, Joseph T. Singewald, Jr., E. K. Soper, Robert K. Warner, George B. Waterhouse, Alfred R. Whitman.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Mining and Metallurgical Engineering, starring those which it considers most distinguished:

| | |
|-----------------------------------------|--------------------------|
| Carnegie Institute of Technology | Stanford University |
| Colorado School of Mines | University of Arizona |
| * Columbia University | University of California |
| * Harvard University | University of Michigan |
| * Massachusetts Institute of Technology | University of Missouri |
| | University of Pittsburgh |
| | University of Wisconsin |
| Pennsylvania State College | Yale University |

PHILOSOPHY

102 ballots sent out.

78 returns; majority, 40 votes.

271 doctorates were conferred in the period 1928-1932.

45 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: George P. Adams, H. B. Alexander, Van Meter Ames, Fulton H. Anderson, A. C. Armstrong, Albert Balz, A. C. Benjamin, Julius S. Bixler, R. M. Blake, Brand Blanshard, George Boas, Edgar S. Brightman, A. P. Brogan, H. C. Brown, E. A. Burt, Gertrude C. Bussen, S. McClellan Butt, Albert R. Chandler, Harold R. Chidsey, H. T. Costello, G.

Watts Cunningham, W. R. Dennes, John Dewey, Ray H. Dotterer, Durant Drake, C. J. Ducasse, D. Luther Evans, W. Fite, W. S. Gamertsfelder, Theodore M. Greene, W. A. Hammond, Charles Hartshorne, Charles W. Hendel, E. L. Hinman, W. E. Hocking, Sydney Hook, E. Jordan, Grace A. de Laguna, Sterling P. Lamprecht, Harold A. Larrabee, Clarence I. Lewis, J. Loewenberg, A. O. Lovejoy, D. S. Mackay, E. B. McGilvary, Alexander Meiklejohn, Georgiana Melvin, Hugh Miller, S. Kerby Miller, Charles W. Morris, Glenn R. Morrow, Arthur E. Murphy, F. S. C. Northrop, D. H. Parker, S. C. Pepper, Charner M. Perry, Ralph B. Perry, D. A. Piatt, D. W. Prall, Oliver L. Reiser, D. S. Robinson, Howard D. Roelofs, James H. Ryan, George H. Sabine, E. I. Schaub, Herbert W. Schneider, W. H. Sheldon, T. V. Smith, E. G. Spaulding, W. Wylie Spencer, W. Curtis Swabey, Ellen B. Talbot, R. A. Tsanoff, Walter B. Veazie, Philip E. Wheelright, D. C. Williams, Ledger Wood, William K. Wright.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Philosophy, starring those which it considers most distinguished:

| | |
|--------------------------|----------------------------|
| Boston University | Stanford University |
| Brown University | * University of California |
| Bryn Mawr College | University of Chicago |
| Catholic University | University of Cincinnati |
| * Columbia University | University of Illinois |
| * Cornell University | * University of Michigan |
| * Harvard University— | University of Minnesota |
| Radcliffe College | University of Pennsylvania |
| Johns Hopkins University | University of Southern |
| New York University | California |
| Northwestern University | University of Texas |
| Ohio State University | University of Wisconsin |
| * Princeton University | * Yale University |

PHYSICS

95 ballots sent out.

59 returns; majority, 31 votes.

483 doctorates were conferred in the period 1928-1932.

52 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Edwin P. Adams, L. H. Adams, Samuel J. M. Allen, Samuel K. Allison, J. S. Ames, H. D. Arnold, James Barnes, J. W. Beams, Frederick Bedell, Ira S. Bowen, G. Breit, Walter G. Cady, E. Leon Chaffee, C. D. Child, Arthur H. Compton, Karl T. Compton, Edw. U. Condon, A. J. Dempster, William Duane, A. Ellett, Arthur L. Foley, Henry G. Gale, Norman E. Gilbert, Arthur W. Goodspeed, H. M. Goodwin, G. R. Harrison, William V. Houston, Leonard R. Ingersoll, Herbert E. Ives, Dugald C. Jackson, Edwin C. Kemble, E. H. Kennard, Norton A. Kent, Carl Kinsley, Otto Laporte, Leonard B. Loeb, F. W. Loomis, M. Luckiesh, L. W. McKeehan, Robert A. Millikan, Louis T. More, Philip M. Morse, P. G. Nutting, Otto Oldenberg, Leigh Page, A. deForest Palmer, G. W. Pierce, F. K. Richtmyer, Harris J. Ryan, A. G. Shenstone, Henry D. Smyth, G. W. Stewart, Otto Stuhlman, F. R. Watson, William W. Watson, H. A. Wilson, A. G. Worthing, John Zeleny, Fritz Zwicky.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Physics, starring those which it considers most distinguished:

| | |
|-----------------------------------------|----------------------------|
| Brown University | Rice Institute |
| * California Institute of Technology | Stanford University |
| * Columbia University | * University of California |
| * Cornell University | * University of Chicago |
| * Harvard University— | University of Illinois |
| Radcliffe College | University of Iowa |
| * Johns Hopkins University | * University of Michigan |
| * Massachusetts Institute of Technology | University of Minnesota |
| New York University | University of Pennsylvania |
| Northwestern University | University of Pittsburgh |
| Ohio State University | University of Virginia |
| * Princeton University | * University of Wisconsin |
| | Washington University |
| | * Yale University |

PLANT PATHOLOGY

100 ballots sent out.

66 returns; majority, 34 votes.

138 doctorates were conferred in the period 1928-1932.

32 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: J. F. Adams, Ruth F. Allen, J. C. Arthur, Eugene C. Auchter, M. F. Barrus, H. P. Barss, E. A. Bessey, J. G. Brown, Mary K. Bryan, W. H. Burkholder, Eubanks Carsner, Leroy Childs, Charles Chupp, William Crocker, J. J. Davis, William Diehl, B. O. Dodge, B. M. Duggar, L. W. Durrell, H. A. Edson, S. H. Essary, J. H. Faull, Howard S. Fawcett, H. M. Fitzpatrick, E. M. Freeman, F. D. Fromme, Max W. Gardner, N. J. Giddings, Annie R. Gravatt, R. J. Haskell, B. B. Higgins, Charles W. Hungerford, Lee M. Hutchins, L. R. Jones, Thomas F. Manns, W. A. McCubbin, L. E. Melchers, I. E. Melhus, Haven Metcalf, H. Elwood Morris, Ray Nelson, C. R. Orton, C. E. Owens, George L. Peltier, R. F. Poole, Frederick V. Rand, Donald Reddick, Howard S. Reed, E. S. Reynolds, Caroline Rumbold, E. S. Schultz, C. L. Shear, C. D. Sherbakoff, Wilhelm G. Solheim, Perley Spaulding, F. L. Stevens, Neil E. Stevens, G. S. Torrey, M. B. Waite, William H. Weston, H. H. Whetzel, Frederick A. Wolf, A. F. Woods, H. C. Young, V. H. Young, Sanford M. Zeller.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Plant Pathology, starring those which it considers most distinguished:

| | |
|-----------------------------|----------------------------|
| Columbia University | * University of California |
| * Cornell University | University of Chicago |
| Harvard University— | University of Illinois |
| Radcliffe College | University of Michigan |
| Iowa State College | * University of Minnesota |
| Michigan State College | University of Nebraska |
| Ohio State University | University of Oregon |
| Pennsylvania State College | * University of Wisconsin |
| Purdue University | Washington University |
| State College of Washington | West Virginia University |

PLANT PHYSIOLOGY

53 ballots sent out.

38 returns; majority, 20 votes.

56 doctorates were conferred in the period 1928-1932.

27 institutions offered work for the doctorate

Composite ratings were made from reports of the following persons: C. O. Appleman, W. M. Atwood, Arthur L. Bakke, E. T. Bartholomew, J. P. Bennett, John W. Crist, Carl G. Deuber, G. H. Dungan, Scott V. Eaton, Floyd W. Gail, W. W. Garner, Basil E. Gilbert, J. H. Gourley, L. F. Graber, E. M. Harvey, R. B. Harvey, R. P. Hibbard, Ondess L. Inman, Earl S. Johnston, William D. Kimbrough, H. R. Kraybill, B. E. Livingston, F. E. Lloyd, Walter F. Loehwing, A. E. Murneck, J. B. Overton, Thomas G. Phillips, George J. Pierce, Ernest S. Reynolds, William Rei Robbins, G. W. Scarth, H. L. Shantz, John W. Shive, H. A. Spoehr, Walter Thomas, W. E. Tottingham, Hamilton P. Traub, Sam F. Trelease, R. H. True.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Plant Physiology, starring those which it considers most distinguished:

| | |
|----------------------------|------------------------------|
| Columbia University | University of Illinois |
| * Cornell University | University of Iowa |
| Iowa State College | University of Maryland |
| * Johns Hopkins University | University of Minnesota |
| Michigan State College | University of Missouri |
| Ohio State University | University of Nebraska |
| Pennsylvania State College | * University of Pennsylvania |
| Rutgers University | * University of Wisconsin |
| Stanford University | Washington University |
| * University of California | Yale University |
| * University of Chicago | |

POLITICAL SCIENCE

100 ballots sent out.

62 returns; majority, 32 votes.

210 doctorates were conferred in the period 1928-1932.

40 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: John Alley, B. A. Arneson, James D. Barnett, Charles A. Beard, Clarence A. Berdahl, F. F. Blackly, Edith C. Bram-

hall, Harold Bruce, D. B. Carroll, Keith Clark, F. W. Coker, Kenneth Colegrove, E. S. Corwin, R. T. Crane, J. W. W. Daniel, James Q. Dealy, C. A. Dykstra, Clyde Eagleton, Carl H. Erbe, John A. Fairlie, J. W. Garner, Leland M. Goodrich, E. D. Graper, Charles G. Haines, J. R. Hayden, Charles E. Hill, A. N. Holcombe, N. D. Houghton, Herman G. James, J. C. Jones, T. S. Kerr, D. W. Knepper, F. K. Kruger, Isidor Loeb, Ralph H. Lutz, Samuel C. May, C. E. Merriam, Frederick A. Middlebrush, William B. Munro, H. C. Nixon, Frederic A. Ogg, Louise Overacker, J. F. Peake, Henry J. Peterson, Frank W. Prescott, Harold S. Quigley, P. O. Ray, Thomas H. Reed, Jesse S. Reeves, George H. Sabine, John P. Senning, B. F. Shambaugh, Walter J. Shepard, L. M. Short, Miller D. Steever, Graham H. Stuart, Jacob Tanger, Kenneth O. Warner, Leonard D. White, W. F. Willoughby, E. Baskin Wright, James T. Young, J. F. Zimmerman.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Political Science, starring those which it considers most distinguished:

| | |
|----------------------------|------------------------------|
| American University | * University of Chicago |
| * Columbia University | * University of Illinois |
| Cornell University | University of Iowa |
| * Harvard University— | * University of Michigan |
| Radcliffe College | University of Minnesota |
| Johns Hopkins University | University of Missouri |
| New York University | University of North Carolina |
| Northwestern University | University of Pennsylvania |
| Ohio State University | University of Pittsburgh |
| * Princeton University | University of Texas |
| Stanford University | * University of Wisconsin |
| Syracuse University | Yale University |
| * University of California | |

PSYCHOLOGY

109 ballots sent out.

81 returns; majority, 41 votes

453 doctorates were conferred in the period 1928-1932.

49 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Gordon W. Allport, John E. Anderson, Madison Bentley, Arthur G. Bills, W. V. Bingham, Edwin G. Boring,

Carl C. Brigham, Warner Brown, W. H. Burnham, H. E. Burt, Harvey A. Carr, Hulsey Cason, Karl M. Dallenbach, John F. Dashiell, F. C. Dockeray, Raymond Dodge, Edgar A. Doll, Knight Dunlap, R. M. Elliott, J. E. Evans, Franklin Fearing, Samuel W. Fernberger, Adelbert Ford, Shepherd L. Franz, Frank N. Freeman, Douglas Fryer, Paul Hanly Furfey, Arthur I. Gates, A. R. Gilliland, Henry H. Goddard, Florence L. Goodenough, Coleman R. Griffith, J. P. Guilford, Edwin R. Guthrie, Harry Helson, V. A. C. Henmon, H. L. Hollingworth, Clark L. Hull, Walter S. Hunter, Buford Johnson, Edw. S. Jones, A. M. Jordan, C. H. Judd, J. R. Kantor, Truman L. Kelley, F. B. Knight, K. Koffka, Herbert S. Langfeld, K. S. Lashley, Mark A. May, William McDougall, John A. McGeoch, Max Meenes, J. B. Miner, John J. B. Morgan, F. A. Moss, Carl Murichson, Gardner Murphy, Willard C. Olson, Donald G. Paterson, F. A. C. Perrin, Joseph Peterson, Walter B. Pillsbury, A. T. Poffenberger, Sidney L. Pressey, E. S. Robinson, David C. Rogers, William T. Root, Christian A. Ruckmick, C. E. Seashore, E. B. Skaggs, Stevenson Smith, Calvin P. Stone, Charles Leonard Stone, George M. Stratton, Edward K. Strong, Jr., Lewis M. Terman, E. L. Thorndike, L. L. Thurstone, E. C. Tolman, E. B. Twitmyer.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Psychology, starring those which it considers most distinguished:

| | |
|-------------------------------------|------------------------------|
| Brown University | * Stanford University |
| Bryn Mawr College | Syracuse University |
| Catholic University of America | * University of California |
| Clark University | * University of Chicago |
| * Columbia University | University of Illinois |
| * Cornell University | * University of Iowa |
| Duke University | University of Kansas |
| George Peabody College for Teachers | University of Michigan |
| * Harvard University— | * University of Minnesota |
| Radcliffe College | University of North Carolina |
| Indiana University | University of Oregon |
| Johns Hopkins University | University of Pennsylvania |
| Northwestern University | University of Pittsburgh |
| * Ohio State University | University of Washington |
| * Princeton University | University of Wisconsin |
| | Western Reserve University |
| | * Yale University |

ROMANCE LANGUAGES

100 ballots sent out.

70 returns; majority, 36 votes.

256 doctorates were conferred in the period 1928-1932.

37 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Edward C. Armstrong, H. C. Berkowitz, Benjamin P. Bourland, Ray P. Bowen, Stephen H. Bush, Arthur G. Canfield, David H. Carnahan, F. D. Cheydeur, Gilbert Chinard, Algernon Coleman, F. A. G. Cowper, J. P. W. Crawford, George I. Dale, Edwin P. Dargan, William M. Dey, Lionel C. Durel, John R. Effinger, Aurelio M. Espinosa, Maurice Faure, Percival B. Fay, Albert Feuillerat, J. D. M. Ford, Joseph G. Fucilla, Joseph S. Galland, Eugene Galloo, Christian Gauss, John L. Gerig, G. C. Glascock, Charles H. Grandgent, Albert L. Guerard, George L. Hamilton, William S. Hendrix, E. H. Hespelt, John M. Hill, Urban T. Holmes, Ralph E. House, T. Atkinson Jenkins, Sturgis T. Leavitt, I. C. Lecompte, F. B. Luquiens, Lander McClintock, Kenneth McKenzie, James F. Mason, Sylvanus G. Morley, Thomas E. Oliver, Everett W. Olsted, Arthur Leslie Owen, John A. Ray, Robert E. Rockwood, Alfonso de Salvio, Rudolph Schevill, Albert Schinz, Colbert Searles, Joseph Seronde, Whitford H. Shelton, William P. Shepard, Horatio E. Smith, Hugh A. Smith, Stanley A. Smith, Antonio A. G. Solalinde, Alexander G. H. Spiers, Norman L. Torrey, George W. Umphrey, John Van Horne, Jacob Warshaw, Ernest H. Wilkins, Edwin B. Williams, C. H. C. Wright, Bert E. Young, C. D. Zdano-wicz.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Romance Languages, starring those which it considers most distinguished:

| | |
|----------------------------|------------------------------|
| Brown University | * University of California |
| Bryn Mawr College | * University of Chicago |
| * Columbia University | University of Illinois |
| Cornell University | University of Iowa |
| * Harvard University— | University of Michigan |
| Radcliffe College | University of Minnesota |
| * Johns Hopkins University | University of North Carolina |
| New York University | University of Pennsylvania |
| Northwestern University | University of Texas |
| Ohio State University | University of Wisconsin |
| * Princeton University | * Yale University |
| Stanford University | |

SOCIOLOGY

92 ballots sent out.

70 returns; majority, 36 votes.

226 doctorates were conferred in the period 1928-1932.

44 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Robert C. Angell, Read Bain, Harry E. Barnes, Howard Becker, Harry Best, Emory S. Bogardus, Henry J. Burt, Niles Carpenter, Clarence M. Case, F. Stuart Chapin, Carroll D. Clark, Charles W. Coulter, J. E. Cutler, Maurice R. Davie, Jerome Davis, James O. Dealey, Neva R. Dearsdorff, Seba Eldridge, Thomas D. Eliot, Charles A. Ellwood, H. P. Fairchild, Ellsworth Faris, Ross L. Finney, Galen M. Fisher, Joseph K. Folsom, Hornell Hart, Joyce O. Hertzler, E. T. Hiller, Floyd N. House, Howard E. Jensen, Carl Kelsey, J. H. Kolb, E. T. Krueger, Benson Y. Landis, F. E. Lumley, George A. Lundberg, Charles E. Lively, Robert S. Lynd, Thomas C. McCormick, Robert M. MacIver, R. D. McKenzie, H. A. Miller, E. L. Morgan, Cecil C. North, H. W. Odum, William F. Ogburn, E. George Payne, Stuart A. Queen, E. B. Reuter, Stuart A. Rice, Edward A. Ross, Dwight Sanderson, Thorsten Sellin, Newell L. Sims, David A. Snedden, Pitirim A. Sorokin, E. H. Sutherland, Carl C. Taylor, Warren S. Thompson, A. J. Todd, Wilson D. Wallis, U. G. Weatherly, Malcom M. Willey, Louis Wirth, Arthur Evans Wood, Howard B. Woolston, Donald R. Young, Erle F. Young, Kimball Young.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Sociology, starring those which it considers most distinguished:

| | |
|--------------------------------|-----------------------------------|
| Bryn Mawr College | University of Kansas |
| Catholic University of America | University of Michigan |
| * Columbia University | * University of Minnesota |
| Duke University | University of Missouri |
| Harvard University— | * University of North Carolina |
| Radcliffe College | University of Pennsylvania |
| Indiana University | University of Pittsburgh |
| New York University | University of Southern California |
| Northwestern University | University of Washington |
| Ohio State University | * University of Wisconsin |
| * University of Chicago | Washington University |
| University of Illinois | Yale University |
| University of Iowa | |

SOIL SCIENCE

75 ballots sent out.

58 returns; majority, 30 votes.

63 doctorates were conferred in the period 1928-1932.

15 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: F. J. Alway, A. B. Beaumont, Andrew Boss, P. S. Burgess, W. L. Burlison, W. W. Burr, L. E. Call, A. B. Conner, H. P. Cooper, G. H. Cutler, Henry Dorsey, O. W. Dynes, W. C. Etheridge, J. R. Fain, E. B. Fred, R. J. Garber, F. D. Gardner, Fred Griffie, H. J. Harper, W. R. Hendrix, H. W. Hulbert, C. B. Hutchinson, F. D. Keim, W. P. Kelley, Alvin Kezer, T. L. Lyon, A. G. McCall, Clyde McKee, T. L. Martin, J. E. Metzger, A. H. Meyer, C. E. Millar, M. F. Miller, R. A. Moore, C. H. Myers, T. E. Odland, J. B. Park, A. L. Patrick, N. A. Pettinger, A. J. Pieters, D. W. Pittman, W. L. Powers, E. B. Reynolds, George E. Ritchey, G. L. Schuster, H. L. Shantz, Charles F. Shaw, R. E. Stephenson, R. P. Thomas, R. I. Throckmorton, S. C. Vandecaveye, S. A. Waksman, H. L. Walster, A. R. Whitson, A. T. Wiancko, R. G. Wiggans, N. E. Winters.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Soil Science, starring those which it considers most distinguished:

| | |
|------------------------|---------------------------|
| * Cornell University | University of California |
| * Iowa State College | University of Illinois |
| Michigan State College | University of Minnesota |
| Ohio State University | University of Missouri |
| * Rutgers University | * University of Wisconsin |

ZOOLOGY

100 ballots sent out.

70 returns; majority, 36 votes.

382 doctorates were conferred in the period 1928-1932.

59 institutions offered work for the doctorate.

Composite ratings were made from reports of the following persons: Edward F. Adolph, Warder C. Allee, Leslie B. Arey, George W. Bartelmez, Cora J. Beckwith, Joseph H. Bodine, James W. Buchanan, E. Eleanor Carothers, William E. Castle, Charles M. Child, Wesley R. Coe, William H. Cole,

Edwin G. Conklin, William W. Cort, Henry C. Crampton, Charles B. Davenport, Alden B. Dawson, Leslie C. Dunn, John H. Gerould, Robert T. Hance, George T. Hargitt, Ross G. Harrison, Edmund N. Harvey, Lewis V. Heilbrunn, Leigh Hoadley, Samuel J. Holmes, Herbert S. Jennings, Harvey E. Jordan, Ernest E. Just, William A. Kepner, Charles A. Kofoid, Albert Kuntz, George R. LaRue, Frank R. Lillie, Edwin Linton, Clarence C. Little, C. E. McClung, Samuel O. Mast, Maynard M. Metcalf, Dwight E. Minnich, Carl R. Moore, Herbert V. Neal, Thurlow C. Nelson, Horatio H. Newman, George H. Parker, John T. Patterson, Fernandus Payne, Arthur S. Pearse, Henry S. Pratt, Oscar Riddle, William A. Riley, Alexander Ruthven, Franz Schrader, George G. Scott, Victor E. Shelford, Aaron F. Shull, Charles R. Stockard, George L. Streeter, Horace W. Stunkard, William H. Taliaferro, David H. Tennent, J. Paul Visscher, Henry B. Ward, Paul S. Welch, David H. Wenrich, Benjamin H. Willier, Henry V. P. Wilson, Sewall Wright, Harry B. Yocom, Charles Zeleny.

The jury named above has by a majority vote approved the following institutions as adequately staffed and equipped for work leading to the doctorate in Zoology, starring those which it considers most distinguished:

| | |
|---------------------------------------|------------------------------|
| Brown University | * Princeton University |
| Bryn Mawr College | Stanford University |
| * California Institute of Technology | * University of California |
| * Columbia University | * University of Chicago |
| Cornell University | University of Illinois |
| Duke University | University of Iowa |
| * Harvard University— | * University of Michigan |
| Radcliffe College | University of Minnesota |
| Indiana University | University of Missouri |
| Iowa State College | University of North Carolina |
| * Johns Hopkins University | University of Oklahoma |
| Massachusetts Institute of Technology | * University of Pennsylvania |
| New York University | University of Pittsburgh |
| Northwestern University | University of Texas |
| Ohio State University | * University of Wisconsin |
| | Washington University |
| | * Yale University |

II

AN ANNUAL RECORD OF DOCTORATES CONFERRED WITH
THESIS' SUBJECTS

The committee recognizes the value of an annual list of doctorates conferred during the year by American colleges, giving institution, field of study, name of conferee and title of thesis, and recommends the annual publication of such a list.

Since the National Research Council for some years has collected all information needed for such a list, from which it has selected the doctorates conferred in science for publication in its annual list of "Doctorates Conferred in the Sciences by American Universities," the National Research Council could, with little additional effort and expense (a few hundred dollars), prepare and publish the complete list of doctorates. The committee therefore recommends to the American Council on Education that it appropriate or solicit the additional funds necessary to make this complete annual list and, if such funds are available, request the National Research Council, with the aid of these funds, to prepare such an annual list as a joint publication of the American Council on Education and the National Research Council.

III

THE PLACE AND THE FUNCTION OF THE MASTER'S DEGREE

This question is a large and complex one. It falls into two very different parts: the academic and the professional use of the Master's degree. Regarding the academic use, the committee submits below a brief and elementary statement. Regarding the professional use, it still feels unqualified to make any definite recommendations.

Indeed, the committee feels that it cannot adequately carry any further the study of this large subject. It suggests that some responsible body—e.g., the American Council on Education, or the Carnegie Foundation for the Advancement of Teaching—delegate some competent person to draw up *not* a survey but a statement of what he thinks would be good practice in the requirements for and the awarding of the Master's

degree, and that this be made the subject of discussion at an Annual Meeting of the Council.

The Master of Arts degree at present serves two purposes:

1. As a sign of the completion of a sort of introduction to more advanced graduate work.

(a) This is useful for students hoping to go on ultimately to the Ph.D.

(b) It is useful also for students wishing merely to continue the pursuit of knowledge for another year or two after the completion of their undergraduate course.

2. As a mark of professional training, chiefly in the field of Secondary School teaching.

This situation is complicated by the existence of various State Educational laws and Board of Education requirements making professional advancement depend on the acquiring of the A.M.

The chief complaints against the present system are:

1. The students are in the main very poorly prepared.

2. They often take the course not for love of learning but to secure a job or higher pay.

3. The time of residence required—generally one year—is too short to accomplish anything really worth while with such students.

4. The course of study often lacks unity and point, requiring merely the accumulation of a certain number of courses or credits.

5. The course of study is often merely another year of undergraduate work, sometimes not as good as the senior year in the same institution and sometimes more rigid than the senior year.

Possible improvement in the situation is made difficult by the double function of the degree. However, certain suggestions may be made. These apply, for the most part, rather less to the professional than to the other uses of the degree.

1. Students should not be admitted to study for the A.M. without evidence of good undergraduate preparation in the specific subject in which they propose to take the degree.

2. The course should be planned in advance with some unity of purpose and coherence in arrangement.

3. Most of the courses should be of a more advanced type than ordinary undergraduate courses, and at least one should be of the seminar type, with some training in methods of graduate work. Assistants should be provided to aid the professor in supervising the work of the students by holding individual conferences with them.

4. The requirement of a thesis, if rightly administered, is of great value in training the student. This thesis should not be required to be a contribution to knowledge.

5. Graduate students should be allowed great freedom in class attendance, but there should be a solid final written examination for the degree of an intensity and breadth appropriate to the standard of a year's work beyond the bachelor's degree.

The requirements for the degree must necessarily differ in many respects in different departments.

IV

PROFESSIONAL SCHOOLS FOR COLLEGE TEACHERS ON THE GRADUATE LEVEL

The committee believes that the present graduate schools meet the need and that no other type of graduate school is desirable.

The committee endorses the findings of the Committee of the American Association of University Professors on College and University Teaching with regard to teacher training for college teachers as printed on pages 23 to 25 of their report and herewith quoted below, and calls attention to their discussion of those findings as printed on pages 61 to 70 of their report.

TEACHER TRAINING FOR COLLEGE TEACHERS

(Pp. 23-25 Report of Committee on College and University Teaching)

"The committee is not prepared to recommend that any requirement of courses in education be established as a qualification for college teaching. It has discovered on this matter a wide divergence of opinion between teachers of academic subjects on the one hand and teachers of education on the other.

Some reconciliation of these divergent views is greatly to be desired, for the committee believes that improvements in the technique of teaching can best be secured by cooperation between the educationists and the academic group in an endeavor to reach common ground. Hence, while not prepared to recommend that, under present conditions, those who are preparing for the profession of college teaching should be required to take formal courses in education, it nevertheless feels that institutions of higher education should direct an adequate amount of effort toward ensuring among members of their staffs a proper understanding of the whole educational system of the United States.

"The present situation in the field of teacher-employment, moreover, is such that many students who are preparing to teach in colleges find it to their advantage to take courses in education in addition to the subject-matter courses which they are pursuing. It therefore becomes a matter of importance to determine what such courses in education ought to be. Consideration should accordingly be given, both by academic departments and by departments of education, to the development of a body of instruction which would be adapted to the needs of those who, while preparing to become college teachers, feel it advisable to equip themselves with the professional qualifications for a secondary school position in case a college appointment does not materialize.

"On the more general question of teacher-training for college teachers the committee, while recognizing the present undeveloped state of the field of teacher-training at the college level, recommends that the following practices be followed to the extent that they are found compatible with the transcendent importance of a thorough training in subject matter:

(a) That the academic departments give consideration, in whatever ways they think best, to methods of teaching and to teaching under supervision.

(b) That they sanction a seminar on problems of American education, with special reference to the college, to be given by the school or department of education alone or in cooperation with the academic departments, this seminar to be optional for students who are preparing to become college teachers.

"An additional step, moreover, the committee is prepared to suggest to universities and colleges at the present stage; namely, that when a department's personnel is large enough, and where students are being prepared to become college teachers, there ought to be in the department at least one member

who is especially interested in the problem of teaching. It should be his duty to take the lead in promoting the discussion of teaching methods within the department; he should be the adviser of those students who expect to enter the profession of teaching; and he should make himself familiar with their teaching experience and capacity. Such a member of the department might also be expected to interest his immediate colleagues in the gathering of materials and the working out of a procedure whereby the effectiveness of their own teaching could be by themselves determined."

We recommend also that the attention of graduate students be drawn not only to the problems of American education as a system in itself, but to the problems of American education as related to the economic, political, and other phases of the social order. The majority of those who at any given time are graduate students will soon, as teachers, be dealing with grave problems in the field of the relation of higher education to the social order. They should therefore have both the opportunity to consider the relation of the college or university as a whole to the social order and the opportunity to consider the particular contributions which in the fields in which they are specially interested may be made to the development of the social order.

V

THE RELATIONSHIP OF SCIENTIFIC INSTRUCTION ON THE GRADUATE LEVEL IN A PROFESSIONAL SCHOOL TO SCIENTIFIC INSTRUCTION IN THE GRADUATE SCHOOL.

(a) The committee would call attention to the diversity in practice; with the idea that an investigation of the facts and the causes of particular relationships might afford securer bases of discussion and resolution of the problem. Four different practices appear to have been followed:

1. That of having the Graduate School administer all graduate work that is credited as such.
2. That of having a general graduate faculty set up regulations under which professional schools autonomously operate.
3. That of having some professional schools outside the Graduate Schools and some (at least, some departments) in-

side. (E.g., the Harvard School of Engineering—outside—and certain departments of the medical school—inside.)

4. The professional schools entirely independent of the graduate school.

(b) The sub-committee feels that a fundamental distinction exists and should obtain between advanced professional instruction and genuine graduate work in professional schools. The issue is raised as to whether professional degrees rather than graduate degrees should not be awarded for advanced professional work. Attention in this connection is drawn to the apparent trend in professional schools to abandon professional degrees. Is this tendency—thought to be characteristic at present in Engineering, Pharmacy, and (possibly) Law—sound?

(c) The question is raised as to whether the professional schools are educationally separate and self-sufficient. Would not they or departments within them be aided and benefited by contact with and integration in the Graduate School? While it is thought that the institutional ideal should be the best possible functional performance, it is also thought that the close association of the professional schools and the university under a common administration of all graduate work would be reciprocally advantageous to all institutional units occupied with advanced work. Indeed, the promotion and guidance of research—the basic duty of the graduate school—makes of it a professional school.*

(d) On the above grounds, the sub-committee recommends that departments within professional schools doing graduate work should be departments or units within divisional organizations of the graduate schools. The graduate instruction of the professional schools should be administratively regulated by the graduate school—whether the regulations are general and horizontal for the whole school or divisional.

* NOTE. The proposal to recognize a distinction between "advanced professional work" and genuine "graduate work" is not intended in any sense as a reflection upon any educational activity or subject—since any such subject may be the object of graduate study. The distinction is one of fact and character.

The committee recommends that the investigation outlined above be pursued and that funds for such investigation be provided.

VI

THE RELATIONSHIP BETWEEN INSTITUTIONS OF RESEARCH AND GRADUATE SCHOOLS

(a) It is extremely important to maintain close relation between universities and research institutions, and with actively investigating agencies of all types. Intimate touch between or among these types of activities is essential. If one classifies the uses of knowledge under the heads of production, transmission and application, the educational institution will represent first of all the agency concerned with transmission and interpretation of knowledge. It is essential that the university include as at least a part of its activity the fields of production and the study of application of knowledge. With this end in view the university should maintain an intimate relation to research agencies, and, in many instances, it will desire to develop important research activities.

In the same way it is extremely important for research agencies and for industrial activities to maintain close relation to universities to mutual advantage of those concerned.

(b) The degree-granting function is naturally and properly a responsibility of the university. Experience, apprenticeship, and broad training in research may develop through research institutions, but the organization of programs leading toward the granting of degrees cannot easily be included in the plans of research institutions without fundamentally altering their structure and purpose. On the other hand, it is important to recognize that the type of research required as the basis of the Doctor's degree should be that which represents the best attitude and the highest level of research. Recognition of such research activities in the granting of a degree is only the approval of an attainment, and the higher the level reached, the more valuable such experience is as the basis for granting of a degree.

(c) Credit for research accomplishment in a research institution is, in general, a question for individual determination. This may be accomplished through conference of investigators in research institutions with the officers of graduate schools.

(d) An intimate relation between universities and research institutions should have value in maintaining the highest level of effectiveness in study of advancing knowledge by universities and, on the other hand, through aiding research institutions to develop clear vision over the broader range of knowledge and in development of such interpretation of research advances as may have educational value.

R. M. HUGHES,
Chairman of the Committee.

Ames, Iowa.

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George F. Zook
G. R. Mann

Constitution

Officers and Members, 1934-35

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The Seventeenth Annual Meeting

THE Seventeenth Annual Meeting of the American Council on Education was held in the lecture room of the National Academy of Sciences, Washington, D. C., May 18-19, 1934.

Eighteen constituent members were represented by 37 delegates, 26 institutional members by 28 delegates, 6 associate members by 7 delegates.

The Chairman of the Council, Dean William F. Russell presided.

The minutes of the last regular meeting of the Council in May, 1933, and of the special meeting in February, 1934, were read by Dr. Doak S. Campbell, Secretary.

Reports of the Executive Committee and of the Treasurer, given in full in this RECORD, were presented in writing.

Honorable Royal S. Copeland, United States Senator from New York, addressed the Council on the subject "Crime and a Revised National Policy in Education." The Senator pointed out that the primary lesson gained from the investigations conducted by the Senatorial Committee on Crime is that anti-social conduct looms as a greater national menace than ever before in our history, and raised the question whether there was any single agency under public control other than the schools to bear the responsibility of training in the qualities of citizenship essential to modern cooperative living. He appealed to the Council for its cooperation with the Education and Law Conference associated with his committee in projects designed to improve the technique of citizenship training.

Superintendent Frank W. Ballou, of Washington, reported on the proposed experiment in character education in the Washington schools. The experiment will begin in September, 1934, and will consist of a systematic attempt to establish character training as one of the fundamental outcomes of education. He pointed out that if character training is to be

one of the outcomes of education it must be encompassed in the scope and definition of the purpose of education. He suggested certain practical steps, by the use of cumulative record cards and otherwise, to secure definite recognition of this objective in the educational process.

A paper prepared by Professor W. W. Charters of Ohio State University, on Techniques of Educational Experimentation, was read in the absence of Professor Charters by Dr. John H. MacCracken. Dr. Charters maintained that in experimenting with character education use should be made of a spear-head organization, that is, that operation should be begun with a few units, a number small enough to be handled with substantial effectiveness. He urged further that in selecting the place of experiment the most favorable unit should be chosen first rather than the most difficult. The immediate outcome of the spear-head project in addition to what is accomplished within the unit is, Dr. Charters stated, "the assembly of experience gained in the operation, the post-mortem examination of results, the improvement of techniques, and the distribution of these materials to other units for their guidance."

Professor Floyd W. Reeves discussed the Tennessee Valley experiment, particularly with reference to its educational aspects, and the personnel policies controlling its operation. He described experiments undertaken in vocational guidance and physical rehabilitation, and suggested that a rare opportunity was presented in the field of mass prevention of disease. Cooperative social studies are incidental to the various projects and these involve the compilation of basic data in all of the social science fields.

Professor Daniel A. Prescott, Chairman of the Council's Committee on the Relation of Emotions to the Educative Process, presented a report on the work of the committee during the past year, operating under a subvention from the Josiah Macy Junior Foundation. He stated that the committee hoped to point out neglected opportunities for experimentation and research in utilizing the schools and other educational agencies to establish the dynamic that underlies purposeful behavior, and to examine the measure of qualita-

tive differences in emotional states as well as the intensity of emotional reaction. He stated that among the questions which the committee proposed to consider were: What is the influence of emotions on the intellectual processes of learning, reasoning and imagining? How far are the patterns of emotional behavior trainable? Do children develop emotional appetites? How shall we discover the emotional orientations of pupils entering school? What is the emotional climate of the school, the emotional effects of conditions of school operation, and of relationships among pupils?

Mr. Otis T. Wingo, Jr., Executive Secretary of the National Institution of Public Affairs, outlined the plans of that organization for training college students in the practical operations of government, and the use of the National Capital as a laboratory for training in public affairs.

Dr. Mann, in his annual report as Director, discussed "Integration." He called attention to the fact that the attitudes of the public at large were being extensively altered in the political and economic world, that the creative spirit is stirring in them and impelling them to build new social institutions. He pointed out that the schools could not escape responsibility for a goodly share of the paradoxical conditions in which we find ourselves, and the need for modification of the system so that it would have the result of integrating feeling and thinking into appropriate action.

Such change would require cooperation on a national scale. The American Council as a national center of coordination could be helpful in securing this nation-wide interest and help in the enterprise. He pointed out that the confidence which the Council enjoys, both of educational institutions and of foundations, is obviously due to its educational integrity, because here educational questions are discussed on their merits, unhampered by special interests or financial bias, and predicted that confidence in the Council would unquestionably continue to grow and its service as a national center of voluntary cooperation in American education increase from year to year so long as this educational integrity is scrupulously maintained.

The Council lunched together at the Cosmos Club.

At the afternoon session Dr. William F. Russell gave the Chairman's annual address under the title "An Old Adventure in Education." He raised the question whether by looking back into the past we might not find useful lessons to guide us in the present economic situation. He suggested that a study of the growth of the American, the liberal ideal, as it flowered in the eighteenth century might be instructive, including in the study the economic experiments in France which preceded the Revolution. He suggested that the liberal ideal of America was not entirely or even primarily due to conditions of frontier life, but represented a reaction from the collectivistic experiments which had been in operation in both England and France in 1750. He expressed the opinion that the new social order would not be the result of the activities of the present, but would be the result of the combined efforts of the last two hundred years. The address is printed in full in this RECORD.

Mr. Howard P. Jones, Director of the National Municipal League and Editor of the National Municipal Review, reported on the organization and work of Citizens Councils for Constructive Economy during the past year, an outgrowth of the conference called by the President to consider the crisis in education in January, 1933. The recommendations of that conference that there be set up in each community a citizens' council, broadly representative of all interests, to clarify and mobilize public opinion in matters of vital community concern, have been given practical effect by cooperative action of more than fifty national organizations under the general auspices of the National Municipal League. During the year 150 local councils have been organized and have shown their effectiveness in bringing about a more intelligent understanding of the operation and relative significance of various forms of governmental activity.

Professor Frank E. Spaulding of Yale University described the formation and operation of the Educational Advisory Committee of the New York State Economic Council. He pointed out that cooperation between those in charge of the public schools and those who pay the bills for their support to be permanently effective must be based on mutual understand-

ing of the educational and financial problems involved. He pointed out that whether acting individually or as a member of the Educational Advisory Committee, each member preserved his disinterested independence of observation, thought and judgment. He described the study made by the committee of the current situation at Little Falls, New York.

The business session of the Council was held at 4 o'clock. The budget for the year 1934-35, recommended by the Executive Committee, was considered and adopted.

On joint nomination of the Problems and Plans Committee and the Executive Committee, the following were elected to membership in the Problems and Plans Committee: In the Class of 1938, Edward C. Elliott, Walter A. Jessup, and Charles R. Mann; in the Class of 1936, Ben D. Wood.

Dr. C. R. Mann was appointed Director Emeritus of the Council.

Dean Russell read to the Council a letter from Dr. MacCracken, under date of April 25, 1934, presenting his resignation as Associate Director, effective as of the same date as that of the Director, and the action of the Executive Committee as expressed in his letter as Chairman, accepting the resignation with regret.

On nomination of the Executive Committee, Dr. George F. Zook was elected Director of the Council for a term of five years.

On motion a committee was appointed to draft an appropriate minute regarding the services of Dr. Mann as Director. Chairman Russell appointed as the committee Messrs. F. B. Robinson, H. E. Hawkes, and William F. Russell.

It was also voted to appoint a committee to draw up a memorandum expressing the great thanks of the Council to Dr. MacCracken for his services. The Chairman appointed as the committee Messrs. Parke R. Kolbe, David A. Robertson, and Guy E. Snively.

Subsequently at the Saturday morning session Chairman Russell announced that after consultation with Dr. Zook, Dr. Mann and Dr. MacCracken would continue in office until August 31st; that the appointment of Dr. Zook would date

from July 1st, but that he would not assume the active duties of the office until September 1st.

The Committee on Nominations, consisting of President F. B. Robinson, President Lotus D. Coffman, and Dr. Joseph H. Saunders, presented their report.

On motion the Secretary cast a unanimous ballot for the nominees, who were declared duly elected as follows: Chairman, William F. Russell, Teachers College, Columbia University, representing the Institute of International Education; First Vice-Chairman, Sidney B. Hall, State Superintendent of Virginia, representing the National Education Association; Second Vice-Chairman, Dr. W. D. Cutter of the Council on Medical Education and Hospitals of the American Medical Association; Secretary, Reverend George Johnson of the National Catholic Educational Association; and members of the Executive Committee: Edward C. Elliott, President of Purdue University, and Cloyd H. Marvin, President of George Washington University.

On motion the following resolutions were adopted:

"The American Council on Education thanks Senator Copeland for his constructive address; recognizes the soundness of his suggestions; accepts his invitation to cooperate with him in establishing the necessary advisory groups to help communities develop experiments similar to that recently authorized by the Board of Education in Washington and described by Superintendent Ballou in his address to the Council this morning."

"*Resolved*, that the Council thanks the National Academy of Sciences and the National Research Council for their cordial hospitality during this meeting."

On motion it was voted that arrangements be made for a banquet to be held in connection with the annual meeting in 1935, at which appropriate recognition might be given of the services of Dr. Mann as Director of the American Council.

Chancellor Capen, President Robinson, and President Elliott, speaking on behalf of the motion, paid tribute to the successful administration of Dr. Mann. The Chairman appointed as a committee to arrange for the testimonial banquet President F. B. Robinson, President C. H. Marvin and Dr. George F. Zook.

The Saturday morning session was devoted to a review of the year's work of the Council's committees. Chancellor Capen, reporting as Chairman of the Problems and Plans Committee, stated that the committee had been inactive for the most part during the year because of lack of available funds. One session of the committee had been held in the fall, at which important decisions had been reached affecting the structure of the American Council, and outlining principles to govern Federal aid to education. He reported that the Rosenwald Fund had renewed its grant so that \$10,000 a year would be available for continuation of the work of the Committee.

President Raymond Walters, Chairman, reported for the Committee on Standards. He pointed out that it was an interesting circumstance that the American Council should be reviving its Committee on Standards at the very time the North Central Association was issuing a new statement of policy regarding accrediting, which deliberately excludes the word "standards" from its official vocabulary. He reminded the Council that the function of its committee was to deal with the principles of classification for accrediting, rather than with the application of these principles. He outlined some of the questions considered at the April meeting of the committee, and announced the appointment of sub-committees to deal with the following subjects: Philosophy of Standards; Relation of Regional and State Lists to Functional Lists; Standards in Professional Fields; and Nomenclature.

Professor John K. Norton, Chairman, reported for the Committee on Education and Government. He stated that the committee had been created to assist in the development of the six-point program for Federal aid to education by investigation and publication. He submitted certain charts prepared by the committee to reveal the effect of the depression on the financial support of education, and stated that the committee had authorized the collection of information as to the crucial issues involved in the simplification of governmental structure in the United States, with special reference to the relation of education to general government.

President Cloyd H. Marvin, Chairman of the Committee on

Fundamental Factors in Achievement, submitted in written form a report on the progress made during the year by the committee in outlining its task. The report stated that in the judgment of the committee the time was ripe for a careful comparison of the results of widely differing experiments conducted under radically different working hypotheses, in an effort to discover what sort of immediate and ultimate goals of instruction best helped teachers in the various subject matters to achieve universally desired results.

The report on the Cooperative Test Service, prepared by Dean H. E. Hawkes, Chairman of the Central Committee on Personnel Procedures, was read by Dr. Mann, in the absence of Dean Hawkes. The report showed that the Service was ahead of schedule in the production of tests, that during the current year over 360,000 tests had been used, and that a new conception regarding the proper use of tests was spreading over the country, in which better recognition was being given to the use of tests for diagnostic and guidance purposes.

President R. M. Hughes presented the report of the Committee on Graduate Instruction. He called attention to the fact that the report of the committee had been published in full in the April number of the RECORD, and stressed certain recommendations made to the Council therein. He explained somewhat in detail the procedure followed in the study of graduate instruction in the universities and colleges of America, and the appraisal of the instruction arrived at by the method of juries, in which over 2,000 scholars had participated.

In the discussion which followed, questions were raised as to the scientific accuracy and validity of the report, particularly in certain fields of instruction, and the danger of working injustice to particular institutions by the method.

After discussion it was voted to receive the report as a preliminary study report.

On motion it was voted to refer to the Executive Committee, for study and report, the question as to what general policy the Council should follow in the authorizing and pro-

mulgating of lists setting forth standards of qualifications for institutions.

The final report of the morning was presented by President Cloyd H. Marvin, Chairman, for the Emergency Committee on the N.R.A., stating that a report of the committee covering its activities last summer had been published in the Educational Record, and that since the period covered in that report the efforts of the Committee had been devoted chiefly to adjusting difficulties experienced by the colleges in connection with the administration of the retail drug code and the restaurant code.

At the Saturday morning session the Director-elect was introduced to the Council by the Chairman and responded briefly, expressing his appreciation of the confidence and honor extended to him in his election as Director, and his acceptance of the election, and pledging not only his best efforts but an independent and scientific approach to the solution of the problems with which we are faced.

Report of the Executive Committee

FOUR meetings of the Executive Committee were held during the year: June 2 and October 7 in New York City, and December 17 and May 17 in Washington. At least ten of the eleven members were present at each meeting in person or by proxy.

One constituent member, the Progressive Education Association, has been added during the year. Twelve institutional members have withdrawn for financial reasons, and five new members have been added as follows: Bradford Junior College, Brooklyn College, Johnson C. Smith University, Tuskegee Normal and Industrial Institute, University of Florida. The number of associate members remains the same. There are at present 226 institutional members, 23 constituent members, and 20 associate members, a total of 269.

The question of the scale of membership dues referred to the Executive Committee by the Council at its annual meeting was considered by the Committee and it was voted to fix the annual membership fee for all constituent and institutional members at \$100 a year, abolishing the graded membership fee varying from \$100 to \$500, which had been in effect since the organization of the Council.

The Treasurer's report shows that during the current year 200 institutional members have paid dues as compared with 198 institutional members in 1932-33. By reason of the reduced scale of fees the total receipts from membership dues amounted to \$22,670, as compared with \$28,085 from this source in 1932-33.

In view of the decision to reduce the membership fees a tentative Director's budget adopted by the Council, subject to adjustment by the Executive Committee was re-studied and the total amount reduced to \$43,835, with a contingent item of \$4,000, or a total of \$47,835, compared with actual disbursements for 1932-33 of \$47,326, and a budget authorized by the Council in May, 1933, of \$48,580.

Under the revised budget the salaries of Directors and staff were reduced an additional 5 per cent, in addition to the 5 per cent reduction of the previous year.

The following grants have been received and accepted by the Executive Committee during the year:

From the Josiah Macy Junior Foundation, a grant of \$5,000 a year for two years, for a study of the Relation of Emotions to the Educative Process, and an additional grant of \$1,500 toward the expenses of a summer conference.

From the Julius Rosenwald Fund, for a meeting of the Problems and Plans Committee, October 29-30, \$407.57.

From the General Education Board, for the current budget of the Council, \$9,000.

From the General Education Board, for the Cooperative Test Service, \$59,211.17.

From the General Education Board, for the general support of the American Council on Education, an amount not to exceed \$300,000 over a five-year period or longer, beginning July 1, 1934, or such date as may be mutually agreed upon.

From the Carnegie Corporation, for the general support of the Council, \$15,000.

From the Carnegie Corporation, for a continuation of the Study of Unitary Differential Traits, \$5,000.

From the Carnegie Corporation, for completion of the study of the Modern Foreign Language Committee and the distribution of its report, \$1,500.

From the Julius Rosenwald Fund, for support of the work of the Problems and Plans Committee for the next two years, \$20,000.

New committees of the Council were organized and began operations during the year as follows:

Emergency N.R.A. Committee, President Cloyd H. Marvin, *Chairman*.

Committee on Standards, President Raymond Walters, *Chairman*.

Committee on Education and Government, Dr. John K. Norton, *Chairman*.

The Director represented the Council on the Joint Committee on the National Emergency in Education, organized by the Commissioner of Education, under the Chairmanship of

Superintendent Rule, and the Associate Director represented the Council on the Joint Committee on the Accredited List of the Department of Labor.

The Executive Committee attempted to secure \$5,000 to cover the expenses of a meeting in the United States of the Committee of Directors of Higher Education, organized under the auspices of the International Committee on Intellectual Cooperation, but has been unsuccessful. In the meantime a report on the existing organization of higher education in the United States, and a report on research organizations in the United States outside of universities has been drafted for the Committee of Directors according to a framework suggested by them, by the Associate Director of the Council, for consideration at the Committee's next meeting.

The Executive Committee has given considerable time during the year to consideration of the best form of organization for the Council. The resultant actions have already been reported in the report of the special meeting of the Council, February 10, 1934, in Washington.

The Problems and Plans Committee, at its meeting October 29th, in accordance with the plan suggested by them and approved by the Council, drew lots for division of the membership into classes to facilitate rotation in office with the following result:

Class of 1934: Messrs. W. J. Cooper, R. T. Crane, H. E. Hawkes.

Class of 1935: Messrs. C. H. Judd, E. L. Thorndike, D. E. Weglein.

Class of 1936: Messrs. L. D. Coffman, B. Ruml, Wm. F. Russell.

Class of 1937: Messrs. S. P. Capen, J. H. MacCracken, E. R. Smith.

The Executive Committee nominates to the Council, jointly with the Committee on Problems and Plans, to fill the three vacancies in the Class of 1938: Edward C. Elliott, Walter A. Jessup, Charles R. Mann, and to fill the vacancy in the Class of 1936 created by the resignation of Dr. Ruml: Ben D. Wood.

Dean Charles E. Hewitt, who terminated his valued eight-year service as Assistant to the Director in charge of vocational exploration, on September 1, 1933, died suddenly at Epping, New Hampshire, February 2, 1934.

The death of Henry Suzzallo, a member of the Problems and Plans Committee of the Council, deprived the Council of a staunch supporter, and an appropriate minute was adopted by the Executive Committee at its meeting on October 7, 1933.

At the regular business meeting this afternoon the Committee will submit a special report in its capacity as a committee to nominate a Director, in accordance with the vote of the Council at its special meeting on February 10.

There is submitted herewith the Director's budget for the coming year with the recommendation that it be approved.

Respectfully submitted,

DOAK S. CAMPBELL,

Secretary.

The Director's Budget, 1934-35

A. CURRENT OPERATIONS OF THE OFFICE

| | <i>Estimated Resources 1933-34</i> | <i>Actual Receipts 1933-34</i> | <i>Estimated Resources 1934-35</i> |
|----------------------------------|--------------------------------------------|----------------------------------------|--------------------------------------------|
| Membership dues..... | \$20,000.00 | \$22,670.00 | \$22,670.00 |
| Reimbursements for services..... | 8,000.00 | 7,670.09 | 9,000.00 |
| Special Grants..... | 19,000.00 | 19,000.00 | 30,000.00 |
| Bank interest..... | | 20.93 | |
| Bank Balance April 30, 1933..... | 4,322.52 | 4,322.52 | 8,075.30 |
| | <hr/> | <hr/> | <hr/> |
| | \$51,322.52 | \$53,683.54 | \$69,745.30 |

4/30/34

ESTIMATED EXPENDITURES

| | <i>Fiscal Year 1933-34 Expended</i> | <i>Fiscal Year 1934-35 Proposed</i> |
|-------------------------------|---------------------------------------------|---------------------------------------------|
| (a) General Operation: | | |
| Rent..... | \$ 3,343.68 | \$ 4,000.00 |
| Salaries..... | 30,134.80 | 40,000.00 |
| Traveling expenses..... | 2,433.85 | 2,500.00 |
| Office expenses..... | 1,526.83 | 2,000.00 |
| Printing and publication..... | 4,186.40 | 5,000.00 |
| General expense..... | 700.36 | 1,000.00 |
| (b) Special Committees: | | |
| Committee on Standards..... | 453.41 | 1,000.00 |
| Contingent..... | | 4,000.00 |
| | | <hr/> |
| | | \$59,500.00 |

B. GRANTS AVAILABLE FOR SPECIAL PROJECTS, 1934-35

| | |
|-----------------------------------------------------------------------------------------------|-------------|
| Foreign Language Study Fund, balance April 30, 1934..... | \$ 2,807.58 |
| Cooperative Test Fund..... | 70,000.00 |
| Committee on Problems and Plans in Education..... | 11,172.42 |
| Committee on Personnel Methods, balance April 30, 1934..... | 121.35 |
| Monograph on Examinations, balance April 30, 1934..... | 4,501.50 |
| South Carolina Survey..... | 10,000.00 |
| Exploratory Study of Unitary Differential Traits in Human Nature, balance April 30, 1934..... | 4,245.76 |
| National Survey of School Finance, balance April 30, 1934..... | 493.77 |
| Exploratory Study of Relation of Emotions to the Educative Process | 8,764.59 |
| Committee on Education and Government, balance April 30, 1934. | 2,617.27 |

Total resources..... \$184,469.54

Treasurer's Report

AMERICAN SECURITY AND TRUST COMPANY

Washington, D. C., May 11, 1934.

DR. C. R. MANN, *Director,*
American Council on Education,
Washington, D. C.

DEAR MR. MANN:

I herewith enclose statements of F. W. Lafrentz & Company, being audits for the period from May 1, 1933, to April 30, 1934, on the following accounts of the American Council on Education:

General Fund
Modern Foreign Language Study Fund,
New York Committee.

I desire to submit these papers as my Annual Report as your Treasurer for the past year.

Very truly yours,

CORCORAN THOM, *Treasurer,*
American Council on Education.

GENERAL FUND

STATEMENT OF RECEIPTS AND EXPENDITURES

From May 1, 1933, to April 30, 1934

RECEIPTS

| | | |
|---------------------------------------------------------------------------------------------|-------------|--------------------|
| Constituent Members..... | \$ 2,200.00 | |
| Associate Members..... | 170.00 | |
| Institutional Members..... | 20,300.00 | |
| | <hr/> | \$22,670.00 |
| Contributions: | | |
| Special Grant for General Support, Carnegie Corporation of New York..... | \$10,000.00 | |
| To Committee on Problems and Plans in Education, Julius Rosenwald Fund..... | 3,005.93 | |
| To Monograph on Examinations, Carnegie Corporation of New York..... | 5,000.00 | |
| To National Cooperation in Education, General Education Board..... | 9,000.00 | |
| To Study of Relation of Emotions to the Educative Process, Josiah Macy, Jr. Foundation..... | 5,000.00 | |
| To Committee on Education and Government, Carnegie Corporation of New York..... | 5,000.00 | |
| | <hr/> | 37,005.93 |
| Sale of Psychological Tests..... | | 12,049.07 |
| Sale of Record Cards, Scales, etc.: | | |
| Sale of Record Cards, Scales, etc..... | \$1,382.45 | |
| Royalties..... | 221.94 | |
| | <hr/> | 1,604.39 |
| Sale of November Conference Reports..... | | 5.75 |
| Sale of Citizens Conference Reports..... | | 72.75 |
| Sale of "State Support" and "Research Problems"..... | | 617.01 |
| Reimbursement for Administration of Grants: | | |
| Modern Foreign Language Study..... | \$ 30.00 | |
| Cooperative Test Fund..... | 2,333.33 | |
| Committee on Problems and Plans in Education.. | 90.17 | |
| Exploratory Study Unitary Differential Traits in Human Nature..... | 250.00 | |
| Committee on Relation of Emotions to the Educative Process..... | 250.00 | |
| | <hr/> | 2,953.50 |
| Interest..... | | 20.93 |
| | | <hr/> |
| Total Receipts..... | | \$76,999.33 |
| Cash on hand, May 1, 1933: | | |
| American Security and Trust Company..... | | 21,291.62 |
| | | <hr/> |
| | | <u>\$98,290.95</u> |

TREASURER'S REPORT

253

DISBURSEMENTS

Salaries:

| | | |
|------------------------------|-------------|-------------|
| Director | \$10,800.00 | |
| Associate Director | 7,560.00 | |
| Assistants | 11,774.80 | |
| | <hr/> | \$30,134.80 |

| | | |
|-------------------------------------------------|-----------|----------|
| Rent—Net | | 381.22 |
| Stationery, Printing and Supplies | | 578.05 |
| Postage | | 465.32 |
| Telephone and Telegraph | | 483.46 |
| General Expense | | 700.36 |
| Traveling Expense—Director, et al. | \$ 857.05 | |
| Traveling Expense—Executive Committee | 1,407.50 | |
| Traveling Expense—Associate Director | 169.30 | |
| | <hr/> | 2,433.85 |

Publication Expenses EDUCATIONAL RECORD:

| | | |
|-------------------------------|------------|----------|
| Expenses | \$2,155.02 | |
| Less: Subscriptions | 362.57 | |
| | <hr/> | 1,792.45 |

Psychological Test Experiment:

| | | |
|-------------------------------------|------------|----------|
| Psychological Tests | \$3,222.22 | |
| Thurstone—General Expense | 4,110.26 | |
| | <hr/> | 7,332.48 |

| | | |
|-----------------------------------------------------------------|--|----------|
| Committee on Personnel Methods | | 2,144.50 |
| Committee on Problems and Plans in Education | | 2,228.10 |
| Exploratory Study Unitary Differential Traits in Human Nature.. | | 2,090.71 |
| National Survey of School Finance | | 276.82 |

National Cooperation in Education:

| | | |
|---------------------------------------|------------|----------|
| Rent | \$2,962.46 | |
| Printing EDUCATIONAL RECORD | 2,393.95 | |
| | <hr/> | 5,356.41 |

| | | |
|----------------------------------------------------------------------|--|----------|
| Committee on Graduate Instruction | | 786.67 |
| Committee on Basic Factors in Achievement | | 1,080.00 |
| National Recovery Act Committee | | 952.28 |
| Committee on Standards | | 453.41 |
| Study of the Relation of Emotions to the Educative Process | | 1,235.41 |
| Committee on Education and Government | | 2,382.73 |
| Tax on Bank Checks | | 9.96 |

| | | |
|-------------------------------|--|-------------------|
| Total Disbursements | | <hr/> \$63,298.99 |
|-------------------------------|--|-------------------|

Cash on hand, April 30, 1934,

American Security and Trust Company:

American Council on Education—General..... \$ 8,075.30

Committee on Personnel Methods:

General..... \$ 56.60

Sale, Conference Reports..... 64.75

Monograph on Examinations... 4,501.50

4,622.85

Committee on Problems and Plans in Education:

General..... \$1,070.42

Sale of Citizens Conference Re-
ports..... 102.00

1,172.42

Exploratory Study Unitary Differential Traits in

Human Nature..... 4,245.76

National Survey of School Finance..... 493.77

South Carolina Survey..... 10,000.00

Study of Relation of Emotions to Educative

Process..... 3,764.59

Committee on Education and Government..... 2,617.27

34,991.96

\$98,290.95

MODERN FOREIGN LANGUAGE STUDY FUND

New York Committee

STATEMENT OF RECEIPTS AND DISBURSEMENTS

From May 1, 1933, to April 30, 1934

RECEIPTS

Contributions:

Special Grant towards completion of Study..... \$1,500.00

Royalties:

Coleman's Analytical Bibliography..... \$ 92.55

Tests..... 465.27

557.82

Refund—Costs of Publication of French and German Reading Test. . . 375.00

Interest on Notes and Bank Deposits..... 21.21

Total Receipts..... \$2,454.03

Cash on hand, May 1, 1933..... 2,391.94

\$4,845.97

DISBURSEMENTS

Salaries and Wages..... \$415.00

Supplies and Equipment..... 7.83

Printing and Publicity..... 22.50

Communications..... 16.07

Travel and Meetings..... 175.27

Expert Assistance..... 1,361.18

Contingent..... 40.00

Tax on Checks..... .54

\$2,038.39

Cash on hand, April 30, 1934: .

American Security and Trust Company..... 2,807.58

\$4,845.97

Director's Report

Integration

THE past year has been one of feverish activity in the fields of politics and economics. Particularly in Washington activity has been as intense but more bewildering than it was during the great war. Then all the numerous groups were intent on achieving a common purpose. Now each is intent upon a different purpose. But results are being achieved. More far-reaching changes in political and economic organization have been initiated than has ever been done before in so short a time anywhere in the world.

These political and economic reorganizations of the New Deal are having significant educational results. The Civilian Conservation Corps is a well-known and conspicuous example. Through its activities, thousands of unemployed and disillusioned young men are getting a dynamic experience with nature in a way that is really building them physically and restoring their shattered morale. Through the work of the Federal Relief Administrator, thousands of unemployed professional men and women, artists and skilled workers are acquiring new interests and skills from helping other unfortunates develop latent capacities, even though the wages earned are low. The Agricultural Adjustment Administration reports that there is evolving a new and enthusiastic spirit of cooperation among farmers in rural districts because of their experience in working together on the specific problems of common interest dealing with the setting of farm quotas and the distribution of farm products. Similarly, the work of building power plants and developing natural resources in the Tennessee Valley is giving to all who participate in it new conceptions of social and industrial life.

Beside these and many other significant experiments initiated by the Federal Government, many volunteer social and welfare agencies are having similar experiences. For example,

the community forums in Des Moines, which are organized and operated under supervision of the Board of Education, furnish opportunities for public discussion of burning contemporary issues to all who desire to participate. Reports from there indicate that these forums have aroused considerable enthusiasm among the people for better understanding of social and industrial conditions and have given many of the participants a new outlook that makes life more bearable and encourages them to help create better conditions.

To me these educational consequences of political and economic reconstruction are the vitally significant features of the changes that are taking place. I am unorthodox enough to believe that the million or so young men from the C.C.C. camps, for example, who have felt the thrill of constructive work in subduing nature, are more likely to be constructive citizens ever after than they would be if they had all spent the same time and energy studying prescribed academic courses in conventional schools or reading brochures on the achievements of civilization. Similarly, the farmers who have experienced the satisfaction of real cooperation in the common interest get a much better understanding of the meaning of America than they would get from reading any number of textbooks on civics and government.

But, in addition to such educational benefits derived by those who take actual part in the experimentation, the attitudes of the public at large are being extensively altered by what is happening in the political and economic world. Because of the hard times followed by such startling public exposures of banking practices and stock market manipulations, people are certainly revising their scales of value so far as mere money is concerned. There are evidences of a welcome tendency among business men to be less determined to keep controversial subjects out of the schools. The ancient dogma that the educative process is one of transforming individuals so that they will conform to social institutions is on the skids along with all the other paraphernalia of privilege. People seem more courageous, more cooperative, more confident. They are recovering their sense of humor. They are conquering the specter

of fear. The creative spirit is stirring in them, impelling them to build new social institutions that will no longer compel them, on pain of starvation, to grind away at things some overlord tells them they must do, but that will enable every man to earn an honest living doing the things he really wants to do.

While we all rejoice at these unpremeditated consequences of our political and economic experimentation, we must also be struck with the tragedy of the situation. For the people who are thus liberated are adults. Many of them have been wandering since their teens in bewilderment, struggling blindly for such liberation. The tragedy is that the schools did not help them achieve this liberation in childhood so that they need not have endured these years of suffering between leaving school and finding such opportunities for liberation. Yet evidence is rapidly accumulating to show that with all our tinkering with the mechanics of schooling we are not getting with the majority of the pupils such really dynamic results as are being achieved as by-products in these experiments in the working organization. Many are even questioning whether the maladjustments of pupils to schooling are not a potent source of the anti-social tendencies that are manifest in the rising tide of racketeering and crime.

A good example of the way in which those who are benefiting from these emergency experiments react to their own schooling is found in a recent editorial in *Happy Days*, the weekly journal "written by the C.C.C. for the C.C.C." After describing the sense of futility that haunted the enrollees before enlisting in the camp, that editorial ends with these words: "Here we are in the C.C.C. We're 300,000 fellows out of work, unfit to handle a job, to vote intelligently, to choose a wife or to raise children. Yet, in ten years, most of us will have made a stab at all of them. And we'll have made a mess of it! Is America going to let our kids grow up to be the impractical, untrained and ignorant drifters that we are?"

How many Americans are now asking this same question? Probably most of those who are employed in the school system are not inclined to take it seriously. But this C.C.C. enrollee is one of ten million unemployed. They all know the pangs

of hunger in the midst of plenty. They are familiar with the fear of losing a job that haunts the forty-five million artisans who work for wages. In addition, many other millions are wondering how men who are products of our schools could be so illiterate economically as to lead or be led into such a depression as this. They note also the steady increase of racketeering, of bootlegging and of kidnapping by men and women whose schooling was presumably designed to help them become good citizens rather than drifters. No; we protected pedagogues must not make the mistake of ignoring the seriousness of this question. Millions are asking it in all sincerity.

It is, of course, clear that schools are not alone to blame for the paradoxical conditions in which we find ourselves. But they cannot escape a goodly share of the responsibility. They are the special instruments which society maintains for the express purpose of promoting good citizenship. They must now deliver the goods or abandon their claim to increasing public support. What are they going to do about it?

Every honest schoolman has known for years that the conventional schooling does not materially help a large proportion of the pupils, particularly at the high school level. The number of maladjusted young people has increased rapidly of late because so many of these youth now go to school because they cannot find anything better to do. Schools have been trying to cope with the situation by recognizing individual differences, by providing vocational training, educational guidance and activity programs that transmute responsibility for teaching by the teacher into responsibility for learning by the learner. These efforts aim in the right direction. But their scope has been limited by the range of subject matter and information that is familiar to school people. They have offered students options in their studies as among science or mathematics or literature or language or shop. They have tried to discover which academic discipline is best suited (or least obnoxious) to the interests and aspirations of particular individuals. But they have not brought the students face to face with vital choices of real life as have the experiments in politics and industry just mentioned.

Why do these emergency relief experiments get the vital result that traditional schooling fails to get? To me, the critical factors are summed up in the two words "integrated personality." School men have been talking a lot of late about integrated personality. But these emergency experiments seem actually to produce it. They integrate thought and emotion in action.

The theory of individual differences has been America's great contribution to the science of psychology and to education. It now appears, in order to achieve America's aspirations completely, that theory must be supplemented with the theory and practice of integrated personality. A firm foundation for a program of cooperative experiments to develop a schooling that really integrates has already been laid by Thorndike in his law of effect, which was announced by him more than twenty years ago and has since been verified more fully by laboratory experiment. Practical means of experimentation directed toward this end in several fundamental lines have been developed by the Committee on Personnel Methods of this Council and are available to everyone. The recently organized committee of this Council on the Relation of the Emotions to the Educative Process will in time give us further guidance on this fundamental question of integration of personality.

Thus guiding hypotheses and materials of experiment are already at hand for a combination of our experiments on individual differences with complementary experiments on integrated personality. By this process we may reasonably hope to develop our schools so that they will produce the sort of constructive citizen that has always been the aspiration of the American people. When we have such integrated individuals our social paradoxes will disappear, for only integrated individuals can produce an integrated world. This is the challenge of America to her schools.

If our schools decide to accept this challenge and make American education a vital force in creating a new world, it is clear that cooperation on a national scale is an indispensable necessity. Such national cooperation requires a national center

of coordination. For several years we have been trying to decide how that center should be organized, operated and financed. Now it appears that the American Council on Education most nearly meets the requirements of such a center. Therefore the challenge to the schools is a challenge to this Council to accept leadership in a new deal in education. Shall we accept? What are the conditions essential to success?

During the past year this Council has spent considerable time and energy discussing its own organization. For several years a group in the Council have maintained that the national voluntary headquarters for education would work better if it were organized on the same basis as is the Social Science Research Council or the Council of Learned Societies. Therefore, the Executive Committee in January, 1933 appointed a special sub-committee of three to investigate this question and make recommendations. The majority of this sub-committee brought in recommendations that institutional members be discontinued so that the Council would consist only of delegates of constituent and associate members, that is, of national organizations devoted to education. Since this proposal would deprive the Council of its main source of support from institutional membership dues, it was proposed that the major support of the Council be secured as grants from foundations.

This proposal was submitted first to the Problems and Plans Committee at its meeting in April, 1933. The recommendation for dropping institutional members was accompanied by verbal assurances that foundation support could be secured if this change were made. The Problems and Plans Committee disapproved this recommendation. On April 20 of that year it was presented to the Executive Committee and was again disapproved. At its Annual Meeting, May 5, 1933, the Council amended its Constitution in such a way as to open institutional membership to a broader range of institutions and to give them a larger share in the work of the Council than they had heretofore had. At the special meeting, February 10, 1934, the Council again amended its Constitution so as to authorize extension of its activities into the entire field of education in conformity with the provisions of its charter.

The foregoing decisions seem to me to be most propitious for the further substantial development of the Council as the much needed national center of voluntary cooperation in education. They strengthen the foundation of the Council in a way that insures continuing, expanding confidence in its work. Anyone who has persistently attended the meetings of the various national organizations in the field of education must realize that each of these is promoting some particular phase of American education and therefore judgments made by the delegates of these associations are more likely to partake of the nature of compromises among the special interests involved rather than of disinterested conclusions concerning the improvement of American education as a whole. In this, the educational associations differ fundamentally from the associations that constitute the membership of the other national councils. Those associations are devoted to the development of disinterested scholarship. Delegates to their councils are not subject to the partisan influences which are necessarily involved among the educational organizations. On the other hand, delegates chosen by individual institutions, though they may have institutional pride, are nevertheless more likely to render disinterested judgments on educational questions than are delegates elected to represent the interests of special groups. Therefore, a Council composed of, say, a hundred delegates of national associations and three hundred delegates of individual institutions is a much safer group for consideration of educational questions. The experience of the Council over the past fifteen years has amply demonstrated the force of this contention.

If the Council wishes to take full advantage of its original organization and these recent decisions, I recommend that the Constitution be still further amended so that every delegate, whether representing a constituent or an institutional member, have the same status with regard to voting. The Council would then be a forum in which the individual delegates vote as individuals on the basis of their best personal judgment as to what is best for the education of American youth. At present we have no such organization in the school world. Such

a group would be more likely than any other that has yet been proposed to operate in harmony with the principles of popular sovereignty as applied to education, as set forth in the Report of the National Advisory Committee on Education. That report shows, you remember, how because we have located sovereignty with the whole people, the American school system is the most nearly folk-made of any system of education in the world. It shows how that system implicitly recognizes that current law making and enforcement are conditioned by the existing level of popular intelligence and character, while schools are maintained to raise the level of public intelligence and character. To insure the achievement of this latter end, we in America have kept the development and control of schools independent of political government. With us, schools are agencies created by the people to help them achieve their aspirations. In other countries, schools are agencies created by government for such uses as government may choose to make of them.

The perpetuation of this American system requires leadership which is so fully aware of the basic requirements of popular sovereignty that it cannot permit our folk-made schools to become the instruments of indoctrination for any group or class. Only thus can we keep the social purposes and specific processes of education in close harmony with the aspirations of the people.

The financial and industrial distress of the past few years has rendered even more imperative the necessity for enlightened educational leadership if our great experiment in popular sovereignty is to succeed. For in the early days of the development of our schools the educational requirements of popular sovereignty were maintained by keeping the financial management of schools as well as their educational control entirely free of the activities of political government. In most places the school board not only managed the school program; it also levied taxes for the support of the schools. These taxes levied by it for school purposes were in addition to, and not under the control of the taxing authorities for other public services. With the changing industrial conditions and

particularly with the diminishing returns from the property tax on which the schools mainly relied, support for schools has been so reduced that the achievement of our educational aspirations is seriously threatened. Some broader, more dependable basis of support is needed if the schools are to render the service required of them.

Because of this financial pressure there has been a marked tendency in recent years toward the consolidation of the taxing authorities, including the school boards, for purposes of economy and efficiency in financial management. Such a consolidation on the financial side is obviously desirable, provided it does not place the social purposes and specific processes of education under control of political authorities. The problem of how state and even Federal financial aid can be given schools without robbing the people of their control of the social purposes and specific processes of education is one of the most critical and significant of present educational problems.

This Council has faced this financial problem in a small way during the past year. From the beginning the office of the Council has been supported entirely by the dues of its members and by the returns from services rendered in administering grants for special investigations. This financial independence has made it unequivocally certain that the Council is owned and operated by the organizations and institutions that supported it. During the first fifteen years of its existence the members have provided for this support in an astonishingly persistent and loyal manner. The general hard times have made it necessary for some of the members to cease paying dues. Though expenditures for the maintenance of the office were cut and the dues reduced, it seemed an impossibility to maintain the Council without curtailing its work, in spite of the remarkable devotion of its members in paying their reduced dues as shown by the Treasurer's Report.

Under these conditions the Council departed from its original policy to the extent of asking for foundation support for the overhead expenses of the office during this transitional period. As a result, two of the foundations have helped the Council financially to the extent of \$30,000 during the past

two years. In addition, the Council voted at its Annual Meeting in May, 1933, to apply for a subsidy of \$50,000 a year for fifteen years for the general expenses and cooperative enterprises which the Council is or might desire to carry on. This request has been granted in part by the General Education Board with an appropriation of not to exceed \$300,000 for the next five years or more.

This temporary solution of the problem of financial support obviously places the Council in the same position as are schools generally with regard to keeping the evolution of the educational purposes and processes independent of financial control. The confidence which the Council enjoys both with educational institutions and with foundations is obviously due to its educational integrity. Here, educational questions are discussed on their merits, unhampered by special interests or financial bias. Confidence in the Council will unquestionably continue to grow, and its service as a national center of voluntary cooperation in American education will increase from year to year but only so long as this educational integrity is scrupulously maintained.

C. R. MANN.

An Old Adventure in Education

THE general topic for this meeting, as printed on the preliminary program sent out by Dr. Mann, is "Pioneer Adventures in Education." With the perversity of the average college professor, I have titled this paper "An Old Adventure in Education," although I shall be talking all the time about the problem of adjusting education to what the so-called pioneer thinkers term "the new social order."

The depression stimulated a lot of cerebration. Professors, along with others, became doubtful of what the future held in store. They saw factories idle; dispirited citizens, unemployed, thronging the streets; banks closed; bonds defaulted; the stock market going low—and then lower. Simultaneously they saw grain elevators full to bursting and boys and girls hungry; cotton bales piled high, and people cold and poorly clad. Something seemed wrong; and from the stimulation of this depression emerged at least two schools of thought.

There are those who look back into the past to see whether or not there is a guide to the present situation in the experience of history. They study the tremendous depression that followed the French and Indian War; the breakdown that followed the War of 1812; the major panics of 1837, of 1857, of 1873 and 1892. Each of these was severe. Farmers received little for their produce; lands were sold for taxes; banks failed; savings were swept away; starving people roamed about. Disappointment and disillusionment drove the covered wagon into the West. Every time, on all sides, there was discouragement and dread for the future. On many occasions in American history, it was freely said that we were at the end of an era; it was stated that civilization had crashed and that the dark ages lay just ahead. But each time we recovered, to surge on to greater heights.

It is difficult for the person who is familiar with social and industrial history to believe other than that we have been merely repeating the experience of the past in the last few

years. As has happened over and over again, thinks this school of thought, social memory is short; there was too much faith in the future, too much optimism, more was borrowed than could be repaid, more produced than could be consumed. In the days of prosperity men over-reached themselves, and in days of depression they have had to wait to catch up. If history has a lesson to teach, it is that, in the course of a few years, goods will wear out, food stocks will be consumed; and with supply diminished and demand increasing, prices will rise, factories will be opened, employees will go back to work, farmers will receive more money and all will be well.

The thoughtful man who believes this will lend his support to all palliative measures suggested in times of depression. He will contribute liberally toward the relief of misery; he will advocate grants to the unemployed; he will stimulate work in every way possible. He will support suggestions and legislation for national planning upon a voluntary basis, and governmental and other public efforts toward the coordination of industry, agriculture and transportation. He may even advocate government ownership and operation of certain basic industries. He will support the regulation of banks, money and credit; he will advocate the curbing of the flotation of dishonest securities; he will try to hold the government in bounds. Hopeful for recovery, even in times of deep depression, he will concentrate his efforts on palliation of the present, and the improvement of the economic system at least to the extent of softening the blow of recurring panics which are probably inevitable under any economic system.

Following this school of thought, the schools will make no new social order. They will attempt to equip future citizens with what they need upon well-known precedents. They will try to instill probity, simplicity, good citizenship, and to equip the future citizen with that curb on selfishness and greed which only a good education can provide.

But there are other professors who take no such view. Their study of history leads them to the conclusion that the benefits of occasional periods of prosperity in no way compensate for the harm done by depressions; that *laissez-faire*,

with its emphasis on individual initiative and competition, only inflames selfishness and greed; and that the great mass of mankind cannot be trusted to know what is for their own good. Some sort of external control must be placed upon man, upon his work, upon his life; and it is to provide this that we find the dictatorship of industry, such as is found in Communism and Fascism. The fact that one has its origin in the revolt of the middle class, the other in the proletariat, does not disturb the essential similarity of the two movements. Each is designed to curb the uncontrolled greed of the man who does as he likes, and each has its scheme of planning, of restricting production, of creating markets, of subsuming under governmental control most of the industrial life of the nation. There are those who believe that democracy and laissez-faire cannot be repaired. We must come to a new society—a new economic life.

Prominent among the more radical members of this group are the successors of the Technocrats, the *Frontier Thinkers*. They study the history of previous depressions and point out that the present one is different from any that has gone before. This, they claim, is because of the changes in technology which since the War have progressed with continuously increasing effect. In fact, so great was the change in the last fifteen years that they term our times as the Second Industrial Revolution or, perhaps better stated, *The Power Age*. Just as the invention of the spinning jenny and the power loom changed the whole fabric of English society, so they believe that modern technology is bringing in its wake the most profound alterations in all aspects of our social structure. Rugg lists five elements in the development of modern industrialism. The modern business enterprise is able to bring "under one central control all necessary raw materials and fuel resources, the mechanism of transport and communication, the mechanism of fabrication and assembling of parts to produce the completed article of consumption." This coordination of all parts of a manufacturing process was not possible prior to previous depressions owing to the fact that at that time they did not have great central generating stations capable of "transmit-

ting power over long distances," the "machines of great force and cleverness," "vast and precise machine tools with which to make the machines," and "precise measuring instruments" without which production in great quantity was confined to products of the cruder sort.¹ Engineers and technologists have established the techniques whereby the necessities of man can be produced by "straight line" production methods, in vast quantities, at little cost, and with little human labor. These frontier thinkers claim that we can produce faster than we can secure the means to purchase; that the present price system, private ownership and all the economy of a capitalistic society based upon laissez-faire have broken down; and that technology will destroy our society. With Rugg they view the past and last year stated "this depression is not a mere fourteenth installment paying time (referring to 13 previous depressions); *it is a day of inventory and final reckoning.*"² They like to consider North America as a unit, from the Panama Canal to Hudson's Bay, and to organize the whole social and industrial life, determining by techniques, supposedly mastered by engineers and technologists, the capacities for consumption of the American people, and then fit production to match it. Iron it all out into a straight line. Keep the engine running evenly. Readjust at intervals. Tell people what work they are to do—and provide each person with everything that it is good for him to have. They do not offer ten acres and a mule. They promise more than a "happy hunting ground" or "milk and honey." They estimate that every man, woman and child can be provided with everything that an income of \$20,000 a year (Howard Scott) or \$4,000 a year (Goodwin Watson) will buy today and that all the work will be done by adults working for a few years in middle life for a few months, a few days and a few hours. There will be no depressions, no periods of unusual prosperity. They will do away with money, prices, debt, taxes, bankers, lawyers, insurance, poor relief and charity.

Some take this extreme position; some are somewhat more

¹ Rugg: *The Great Technology*, N. Y., 1933, p. 38.

² Rugg: *Op. cit.*, p. 16.

moderate. Those associated with the New America movement advance a program believing in production to the limit, of assuring everyone who does his part of a good living, of giving work to everyone, of letting him live his own life (if in keeping with the common good), of giving everyone a chance to enjoy life, of providing leaders who will be trusted and of drawing upon the best of all the world. To accomplish this they propose to "carry through the whole program." "We offer not patches and repairs," they say, "but a whole new civilization. We intend not gradual reform but complete transformation. We will not weaken our program with compromise. Our means will fit the circumstances, but our ends are clear. Expert plans are being provided for every phase of our political, economic and educational activity, but experiments, trial and success in real life will also be needed. No paper plan can be perfect. As soon as we are strong enough to command the required majorities, we will name candidates for all controlling governmental posts, and inaugurate the new society. We know that our country has resources enough and brains enough to make this program possible now. We know the American people want these goals. We supply what has been lacking,—the unshakable, unswerving determination to carry through the whole program. Our last word is, 'WE WILL.'"

The New America moves toward the *seizure of power* through orderly effort to control the ballot boxes, the other dictatorships referred to above have reached power by diverse methods and have used widespread popular and compulsory education to entrench themselves. The *Social Studies Commission of the American Historical Association*, which has submitted its report recently, in a much more moderate and tempered estimate, predicts a new collectivistic society, and places upon the *school* the burden of effecting easily the transition.

"If the school is to justify its maintenance and assume its responsibilities, it must reorganize the new order and proceed to equip the rising generation to cooperate effectively in the increasingly interdependent society and to live rationally and

well within its limitations and possibilities. If education continues to emphasize the philosophy of individualism in economy, it will increase the accompanying social tensions. If it organizes a program in terms of a philosophy which harmonizes with the facts of a closely integrated society, it will ease the strains of the transition taking place in actuality. The making of choices cannot be evaded, for inaction in education is a form of action.

"From this point of view, a supreme purpose of education in the United States, in addition to the development of rich and many-sided personalities, is the preparation of the rising generation to enter the society now coming into being through thought, ideal and knowledge rather than through coercion, regimentation and ignorance; and to shape the form of that society in accordance with American ideals of popular democracy and personal liberty and dignity.

"The program of social science instruction should provide for a realistic study of the life, institutions and culture of contemporary America. In doing this, it cannot omit study of the inefficiencies, the corruptions, the tensions, the conflicts, the contradictions and the injustices of the age."

If American children are to study the inefficiencies, corruptions, tensions, conflicts, contradictions and injustices of any age, I suggest that they study the inefficiencies, corruptions, tensions, conflicts, contradictions and injustices of England after Clarendon or France after Colbert, and come to appreciate the characteristics of a planned and managed economy, of a bureaucracy that employed an army of functionaries to enforce the shape of handkerchiefs, the design of boat permitted to the Breton fishermen to use, the kind of fishing allowed in Languedoc, the price of meat and bread, the right of transportation, and the monopolies on wood and water. The ideals of liberty and equality, flowering in the French Revolution, had their origin in economic tyranny just as much as in political and religious, and Montesquieu, Voltaire and Rousseau, Holbach and Helvétius were thinking of how men earned their livings as well as how they lived. James Truslow Adams speaks of the American dream. I am convinced that this dream was not only an aspiration for the future, but also the

statues of Liberty, one as it is looking to the South in peaceful contemplation, one with hands raised high in hope toward the West, the other with its hands warding off and repelling the tyranny to the East from which our fathers fled.

If American children want to know about inefficiencies, corruptions, tensions, conflicts, contradictions and injustices of life, let them consult Jefferson and Madison, Thomas Paine and Gouverneur Morris, or better yet Mirabeau and Barère, Camille Desmoulins, and Marat, St. Just and Danton, Turgot and Condorcet. Let them follow the growth of the American, the liberal ideal, as it flowered in the eighteenth century. Let them ponder upon a country anaesthetised by tyranny in 1749, at the time when the *Esprit des Lois* was published, which in the short space of forty years became so aroused as to provide the new delegates to the national assembly with a series of instructions in the *Cahiers* which prove the Revolution to have been the result of a vast system of popular adult education. Of some 750 of these instruction books, two-thirds are still available for consultation, and it is amazing to see how, in small town after small town, the people themselves demanded what the national assembly afterwards accomplished.

The people of France had suffered from a perpetual depression. The economic planning and regimentation of Colbert had given but momentary relief, followed by the oppression of ignorant bureaucrats and avid functionaries. They resolved to build a new society, a land of the free, a home of equality (fraternity was a vague ideal, introduced late). The Jacobin Clubs had as their motto, "Vivre Libre ou Mourir." Publication, pamphleteering, public discussion and debating and discussion clubs were their methods.

Let the American teacher also reflect upon the warning of the Comte de Ségur: "When we were young," he wrote, "we laughed mockingly at the old fashions . . . all that was old seemed to us tiresome and ridiculous. . . . Voltaire carried away our intellects; Rousseau touched our hearts; it gave us secret pleasure to see them attack an old structure which seemed to us gothic and ridiculous, and so, without regret for

the past, without fear for the future, we walked gaily on a carpet of flowers that hid the abyss beneath our feet."

Let the American teacher also understand one additional fact quite clearly. A number of the frontier thinkers contrast the present economically interdependent society with the individualistic economy of the isolated American pioneer, falsely assuming that our traditions date from that, and that our complicated society today demands something far different. Let their study of inefficiencies, corruptions, tensions, etc., lead them to England and France in 1750 where a society in many ways collectivistic had long been in operation. The rugged individualism of Daniel Boone had an influence which in my judgment is much exaggerated.

Let the American teacher clearly understand that human misery and social injustice existed in France and England in 1700, and that liberalism and laissez-faire were the best proposed solutions of the frontier thinkers of that day. The first acts of the people in the French Revolution were to take the government *out* of business. Let them also know, now that we find human misery and social injustice today, that our frontier thinkers urge the government *in*.

Let the American teacher realize that we act like the heron. Left foot down, the water cold, the heron puts down his right foot. The right leg gets cold. He puts the left down again and the right foot up.

In our universities and colleges, in our teacher training institutions and in our elementary and secondary schools, to the best of our abilities, let us give the true picture (if that be possible) and, what is equally important, the whole picture. For the efforts of educators to change society have been painted on no small canvas. There is a panorama extending at least 200 years. I doubt if we are facing a new era. My copy of the Procès-Verbal of the Provincial Assembly in Rouen in 1787 shows that the discussions were centered about problems that are strangely modern. What to do about the textile industry in Rouen, when the English have a machine that will do the work of twelve weavers with one? What to do when coal costs 55 livres a ton, when it is only 12 in Manchester?

How to provide made work for the unemployed? How to institute public works, roads, canals, forestry, swamp drainage? How to tax the rich and not the poor?

There are two kinds of waves on the ocean, the ordinary waves that we see and the huge waves, the results of which are the tides. Let us not confuse the little waves with the big. The new social order, as I see it, will not be the result of the activities of the present. It will be the results of the combined efforts of the thinkers of the last 200 years, of Tugwell and Turgot, of Rugg and Rousseau, of Counts and Condorcet, of Danton and Dewey. It is a big movement. It is a long movement. It has momentum. And shortsighted indeed will be the American schools if they fail to teach their pupils their proper place in the succession of social reformers, and stupid indeed will they be if they fail to appreciate and be thankful for their heritage.

WILLIAM F. RUSSELL,

*Chairman of the American Council on Education;
Teachers College, Columbia University.*

Crime and a Revised National Policy in Education

BECAUSE of the interest of your director in my work, each of you has received a copy of the digest of testimony presented before the Committee on Crime, of which I am Chairman. My address to the Cleveland Convention of the National Education Association on the subject of Education and Crime Prevention has been reprinted in your journal, *THE EDUCATIONAL RECORD*. Copies of my address in the Senate on January 11th have been supplied to many of you. I assume, accordingly, that the invitation for me to speak before this group today was prompted by a desire to hear more about the educational policy I have set forth, and particularly by a desire to have me point out its relation to the work of your American Council.

In essence, that policy calls for prompt and continuous readjustment of educational aims and methods as conditions and necessities change. We are in a war against ignorance and crime; battle fronts must shift as we discover the movements of the enemy.

The primary lesson gained from our Senatorial investigations is that antisocial conduct looms as a greater national menace than ever before in our history. In consequence, we must develop a quality of character higher than that required by any previous social order.

I wish time served to discuss the significance of the greater freedom and range of choice that comes to each succeeding generation of young people. As I see it, the only way to equip youth for this freedom is to formulate a suitable but not too inflexible pattern of social habits. Then we must help them to accept and adopt standards of value which will appeal to their intelligence and will influence their choice of the right behavior.

There is abundant reason for alarm today because of the fact that large numbers of professional men with highly developed intellectual capacity, have displayed utter lack of in-

clination to live by the codes of ethics of their respective professions. I need not enumerate well-known examples in the persons of lawyers who have amassed wealth through aiding and abetting criminals and helping predatory interests to keep within the law. The public is informed of cases of ostensibly respectable attorneys receiving annual retainers for advice and counsel as to how to commit criminal acts with a minimum of danger of conviction. The list is so long that there has been a complete undermining of the confidence of many of our people in the ethical standards of professional men.

We ask ourselves: Upon what agency can we depend to make sure that the next generation is brought up with a more adequate sense of trusteeship than the present generation has disclosed? Is there any single agency under public control, other than the schools, to bear the responsibility of training in the qualities of citizenship essential to modern cooperative living?

You all know I ask this question without a thought or inference that the public schools have been remiss or negligent in the past. Rather, I make the question a preface to issuing a challenge to the public schools of the future.

My thinking is colored, naturally, by experience in health education. Experience in that field indicates that the greatest return for energy expended comes from our work with children—the children of tender years. If you have read the testimony at the hearings before the Committee on Crime, you will find data to support the hypothesis that the most critical years for citizenship training are the early years of the child's life in school.

During the New York hearings, I was greatly distressed to hear a well known and highly placed professor state that preceptorial instruction is useless in character education. I am well aware of the importance of example, and the necessity of placing increased emphasis on developing habits which make for social effectiveness. But so long as authorities deny any place to precept in the character-training program, my old fashioned mind insists there is a crying need for further research in the field of better character and improved citizenship.

I have been much impressed by the inability of the motion picture industry to find ways of interpreting and applying the results of the Payne Fund researches in that field. This is too bad, as I view it. Personally, it seems to me we should not be content to see research in character education halted until the movies, the public press, the radio, and all the general educational agencies are contributing through voluntary cooperation only that which is of positive value to the lives of our young people. Neither should we be content until such time as we find how to coordinate the efforts of all the character-building agencies—the Boy Scouts, Girl Scouts, the Big Brother movement, the 4-H Clubs, and the two hundred other more or less prominent national movements, which are contributing to the prevention of juvenile delinquency, as well as to the happiness of our boys and girls. We certainly need closer cooperation with the home through the Parent-Teacher movement and similar agencies. I venture to suggest also that we must find some more effective means of giving force to those religious influences which are brought to bear upon the inner life of the youth.

I appeal to you for support in character education of a research program whose scientific worthwhileness, if I may use the word, will be built upon a better record system than is yet in customary use. I am not unmindful of the valuable efforts of the American Council on Education in spreading the use of the continuous record card. I observe that Dr. Charters follows me on this program. He can be counted upon to discuss and press newer techniques which we may safely accept. I merely refer to the elementary fact that good records are basic to scientific thinking and scientific criticism. We medical practitioners took a long forward step when we adopted the practice of keeping complete records of the condition and progress of every patient. My emphasis on the use of continuous behavior records is due to the conviction that without them children will not be dealt with properly, no matter how competent the teachers may be. In the modern scientific sense a child cannot be understood in the absence of a behavior record kept from early childhood. Without it the diagnosis of the teacher

is founded on nothing more substantial than an expression of interest, affection, or a mere "hunch." In this, I am merely supporting the admonition of Professor Morrison of Chicago when he entreated teachers to "learn" their children before trying to "teach" them.

May I venture to urge also the responsibility resting on you in relation to the character of the graduates from your colleges and universities? We all know that professional degrees are granted in large number without any genuine examination into the moral character of the men receiving these degrees. And yet, so far as I know, never before has a nationally representative body like this Council, fairly faced the implications of the fact that a degree or other credential from an educational institution at the present time, certifies only to scholarship and technical competency. Only a national crisis like this could give force to the question, Do we not owe it to society and to our nation to see to it that no one receives a credential and the implied endorsement of one of our institutions unless he has established a behavior record to justify its receipt? The granting of a degree should represent a vote of complete confidence in the character, sense of service and public spirit of the recipient. It is my belief, as you know, that there should be a review and a restatement of the objectives of education. In my opinion, too, these times demand of every institution that it check objectives to see that qualities of citizenship and character have an adequate place in plan and practice.

You are far more competent than I to decide how much attention should be given the character status of your entering students, the observation of their behavior while they are with you, and the guidance and treatment essential to developing the best capabilities of each of your undergraduates. My purpose in coming here today is to ask in all respect that you reflect upon your objectives and practices in dealing with these responsibilities. Particularly, I ask that you consider how your policies fit in with the sound national policy which demands looking toward training in citizenship and a sense of social responsibility throughout the educational career of every youth.

You won't mind my saying that you will not have adjusted

your policy completely until we have a new deal in education. We shall not be contributing to that quality of citizenship to which I have referred, until the fundamentals of American education are set up in terms other than the "three R's" and school book content. The practice of the past in focusing upon subject matter needs no defense. A century ago the need of the times was for a higher level of literacy. Just as clearly today, the need of the times is for a higher level of character.

In this company, such a statement is a platitude. But we shall not have a revised policy recorded as the settled will of the American people, and we shall not be fully free to act upon such a policy, until the boards of education of every school district of this land and the majority of the people of these United States have come to understand and accept our standard. I have come here to ask your collaboration in a drive to win universal acceptance of the idea that citizenship rather than the "three R's" should be regarded as the foundation of American Education.

You are turning out each year hundreds of thousands of men and women who will be largely responsible for forming the public opinion of the next generation. We must depend upon you that through your faculty and students, this educational policy shall be established if it is deemed worthy of general acceptance.

There can be no doubt that training received during the tender years has a basic influence upon character. It follows then that the hope of recruiting into your student body boys and girls of well matured personality, depends upon your success in extending character training throughout the public school system. To this end, you must exert the same sort of leadership in character education that traditionally you have exercised in the field of content and scholarship.

Such leadership must be founded on patient study of the problem. It involves a determination of the quality and range of technique appropriate for each age group. You will guide and train dynamic leaders and supervisors to construct adequate citizenship programs and to administer them effectively. You will train a new generation of teachers prepared accord-

ing to new specifications. The new teacher-training program will center upon the practices and perhaps the insight, through which teachers will learn to know their pupils as human beings, rather than upon subject matter through which students may achieve high scholarship. The new teacher will come to understand how to use the methods which specialists have developed through the child study clinics. When this system is perfected and in use, we can afford to be reconciled to some sacrifice in mastery of intellectual content and of acquaintance with historic educational methods.

You will appreciate the success with which you have trained these teachers and the success with which you have built up public opinion to support them, when a new generation of youth, trained by the new teachers, offers itself for admission to the higher educational institutions. If you have succeeded, applicants for matriculation will meet the high standards which you will then set for character, as fully as they meet the high standards which you now set for scholarship.

I should be truly sorry if the teaching profession should decide to continue the old objectives of scholarship which have a minimum concern for the moral, ethical, and social training of the student. In achieving the new program I grant you will have to pay a price. It will be a double task to turn out graduates of high character, as well as of high achievement in scholarship and technical competency.

By this time you may be asking yourself the question: "What is the most promising beginning of a new deal in education?" Reflection upon this question calls for an expansion of my earlier addresses in which I argued for research and the establishment of spearhead demonstration centers. I feel confident of a sympathetic understanding of my suggestions in this field, because I know of the emphasis that the Council has placed upon research in the past. Dr. C. R. Mann, your director, and the editors of THE EDUCATIONAL RECORD, have been diligent in seeking out and reporting important experiments and researches.

I am appealing for your collaboration with the Education and Law Conference, associated with my committee, in all

those projects designed to improve the technique of citizenship training and promote the acceptance of this technique by all our schools. The statement cannot be too often repeated, that there is a critical need for expansion of knowledge in this field and for adoption of higher standards of quality in citizenship training.

My attention has recently been called to a bulletin of the Office of Education, Number 11, published in 1931, entitled "Educating All the Children of All the People." Many, if not all of you, have this publication in your files. This bulletin describes an interesting experiment of the Granite Consolidated School District of Utah, an experiment designed to achieve unusually broad objectives. In its preface, outlining these objectives, the bulletin states that "Education, in the large sense, includes the duty of following up every child to the age of eighteen, for three hundred sixty-five days of the year, in and out of the classroom, with the aim of helping him develop his capacities to their greatest usefulness."

I ask you to review this bulletin and to reflect upon the effect of achieving on a national scale the objectives which are stated therein. If we accounted effectively for every boy and girl up to the eighteenth year, as they undertake to do in Granite District, the evidence seems to indicate that we would cut our crime bill at least in half.

What is more important, we would, through guidance, greatly multiply the happiness and usefulness of large numbers of youngsters now maladjusted. Obviously, this program calls for an extensive coordination of efforts in the community. It assumes a broadened administrative policy, as well as a pupil-centered program in guidance and teaching. Such a demonstration deserves national recognition and the support of the best technical advice available, to insure the achievement of its fullest national values.

It has been your policy in the American Council to give encouragement to such projects by extending recognition to them. Last year's program was devoted to such encouragement of four great demonstrations in as many States. I am advised you thus recognized the Nebraska experiment in individualized

instruction. As I understand it, it is in the same general field as the Winetka experiment and the experiments with the Dalton plan. All of these are in a field of experimentation which leads us toward a pupil-centered, rather than a content-centered, education.

The question I raise is, would these demonstrations be benefited by receiving added recognition at this time? Should we of the Education and Law Conference collaborate with you in the encouragement of these fertile experiments? Have you set a precedent which we with others should follow in your appointment of a joint advisory committee for Dr. Ballou's project?

Dr. Ballou and Dr. Charters, who will follow me, are far more competent than I to discuss the technique for the conduct of such spearhead experiments. I must run the risk of anticipating their addresses by saying that the theory of the spearhead attack involves the abandonment of "panaceas" in education. It assumes that a good educational job involves putting to work all the good ideas, good techniques and information known to the education profession. It assumes a plan of attack which begins by fully modernizing the instruction program in a few centers, taking them on, if necessary, one at a time.

Further, while we are learning to do a quality job in each center, we must learn how to adapt the procedures learned in that center, to other schools and other persons all the way across the land. We must do this moreover by methods which fall within the available financial and human resources of the average community. I am aware that hundreds who have been convinced of the merits of the Winetka and Dalton programs have adopted these plans, only to fail in practice through a lack of information as to the detailed steps necessary to the transition. For myself, I am entirely willing, and I am sure this will be a relief to those who have suffered my preachments, to do everything possible to aid a plan of initiating, one at a time, growing centers of pupil-centered programs. These should adequately express a new deal in education, both in breadth of objectives and in techniques employed.

To summarize, let me say: The present national emergency demands that you, as leaders of American education, shall do something now about citizenship training. I invite your attention to what I regard as the two major considerations:

First: Let us re-state our national policy in terms of personnel objectives and win popular support for our plan. We seek a dynamic policy which shall bring about continuous progress.

Second: Let us achieve in practice a new deal in education. My associates in the Technical Committee of the Education and Law Conference are organizing and assisting in spearhead demonstrations of the new deal.

We are proud of the past evolution of our American schools, in which you have played a distinguished part. I would join with you in volunteer and unofficial efforts to further a continuous and a more rapid evolution.

ROYAL S. COPELAND,
United States Senate.

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An Experiment in Character Education in the Washington Schools

IT IS proposed to undertake an experiment in character education in the public schools of Washington in September, 1934. In this experiment a systematic attempt will be made to establish character training as one of the fundamental outcomes of systematic and fortuitous education.

The inauguration of this experiment in an established system of public education will necessarily affect practically every aspect of the educational program. It will also ultimately concern itself with all organizations of young people dealing with character training, and with all those instrumentalities which influence the attitude of mind, and the behavior of young people.

PURPOSE OF INSTRUCTION

If character training is to be one of the outcomes of education, it must be encompassed in the scope and definition of the purpose of education. Heretofore the results achieved by pupils in the public schools may have been, as Senator Copeland states, too largely recorded in terms of achievement in subject matter represented by grades earned in the elementary schools and by grades and quantitative units in the senior high schools. Somehow the results of the pursuit of subject matter and of other activities in the school should find their way into the activities, behavior, and conduct of young people. The purpose of education should be redefined to include the ideals of social justice, cooperative living, and the privileges and responsibilities of good citizenship, in addition to present intellectual achievements and manual skills.

SUBJECT MATTER

Likewise the subjects of instruction must be gradually modified in order that their direct or indirect value in the development of character may be emphasized. Subjects that have the greatest potential character training value should be substi-

tuted for, or be given a larger place than, subjects possessing less intrinsic character building value. In addition, the general school activities in which pupils participate may ultimately be found to provide larger opportunity for character training than instruction in most subject matter. An attempt will be made to define the desired results in terms of character traits to be achieved through subject matter as well as through activities.

METHODS OF INSTRUCTION

In this character training experiment current methods of instruction will necessarily undergo some modification. Changes in teaching methods should be more and more toward individualization of instruction and away from uniform mass instruction of the group or class.

FORTUITOUS EDUCATION

With character training as one of the outcomes to be achieved through systematic as well as fortuitous education, systematic instruction in the classroom will not be considered as the exclusive means of education. The playground and the extra-curricular activities of the school as a whole will be so organized as to represent the highest form of cooperation among the pupils of the school, and represent also a systematic training of young people in ways and means of acting together for the common good. In its systematic program of education the school must also take into account the casual or fortuitous education which every school pupil receives from his many and varied life experiences outside the school.

INAUGURATING THE EXPERIMENT

Having considered briefly some of the effects which the incorporation of a program of character training will have on the established program of education, let us turn to a consideration of the contemplated methods of inaugurating this experiment in the public schools of Washington.

SCHOOLS

Any experiment undertaken in such a large organization as a school system must be begun in a limited way and gradually

developed and extended throughout the school system. It is proposed to inaugurate this experiment in selected typical schools representing the whole school system. Washington maintains separate schools for white and colored children. Accordingly, one school for white children and one school for colored children for each rank will be selected for the experiment as follows:

- 2 elementary schools
- 2 vocational schools
- 2 junior high schools
- 2 senior high day schools
- 2 senior high night schools

It is proposed to begin the experiment in the early years of the elementary school, and include in the experiment the first year students of the vocational schools, the junior high schools, and the senior high schools. It is contemplated that the experiment will run for approximately three years by which time the class that begins the experiment next September will complete the prescribed three year course of instruction in the vocational schools, the junior high schools, and the senior high schools.

The experiment will be extended to other selected schools as rapidly as additional schools qualify to undertake the experiment and money is available for such extension.

PERSONNEL

It is proposed to select an officer of the rank of assistant superintendent to take charge of this experiment under the supervision of the Superintendent of Schools. That officer will be selected on the basis of his or her educational and administrative success as a school officer and on his or her demonstrated or potential interest and success in character training. This officer would supervise and direct the following officers who are officially related to this experiment:

- 2 elementary school officers
- 2 principals of vocational schools
- 2 principals of junior high schools
- 2 principals of senior high day schools

- 2 principals of senior high night schools
- 2 assistant superintendents in charge of educational research
- the director of school attendance and work permits.

The functions of the principals of day schools in this experiment will be readily apparent and need not be discussed. The assistant superintendents in charge of educational research will assist in recording the progress of the experiment. The director of school attendance and work permits is the school officer most familiar with the cases of children who are absent from school as well as those cases which ultimately reach the Juvenile Court. The director of school attendance and work permits is the school officer who has official contact with the Juvenile Court where records of juvenile delinquency are available for study.

Within each school selected to inaugurate the experiment, persons especially qualified to handle personnel and behavior traits will be added to the teaching staff. Likewise the clerical help will be provided in each school necessary to keep the records involved in the experiment.

TRAINING THE PERSONNEL

It is proposed to conduct a training institute or conference for a period of about three weeks at the close of this school year to prepare the administrative officers who will inaugurate and supervise the experiment in its purpose, scope, and significance to the end that the experiment may be inaugurated promptly on the opening of schools in September. It is contemplated that educational consultants from outside the school system will be secured to assist in conducting this training institute as well as to give advice and counsel through periodic visits to Washington as the experiment progresses. In addition to securing the advice and counsel and support of members of the educational profession who are best qualified in this field, it is proposed also to secure the assistance of prominent laymen who are interested in the problem of preventing juvenile delinquency and the general improvement of social conditions.

CUMULATIVE RECORD CARD

It is proposed to introduce a cumulative record card for each pupil in each of the schools undertaking the experiment. This cumulative record card will cover not only the success of pupils in their subject matter instruction, but will include also a record of behavior traits as they develop in the pupil from time to time. These records will be made on the basis of reports of teachers submitted to the research assistant in the school. These records of behavior traits will be the basis of efforts of the principal and the teacher for giving constructive help to the individual pupil in the development of appropriate behavior traits.

SUMMARY

This experiment in character training requires a shift of emphasis in our educational thinking, from subject matter to be taught to the development of personalities in those being taught. This change of point of view respecting the educational process must necessarily be gradual because it involves a re-education of the present members of the teaching profession, not only in the purpose of education but in subject matter and in methods of instruction. As instruction becomes more individualized, the individual needs, capacities and future careers of young people may be more clearly and more definitely provided for in so far as systematic education is concerned. The final success or failure of the experiment will depend, to a large degree, on the success of the teacher in the classroom in putting into effect a modified philosophy of education and a modified technique in teaching. The full measure of the success or failure of the experiment can be measured only in terms of the character and conduct produced in the young people who participate in the experiment, observed years hence when these same young people are the citizens of a new social order in which better living conditions abound, happier individual lives are lived, and a higher degree of social justice prevails.

FRANK W. BALLOU,
Superintendent of Schools,
Washington, D. C.

Experiments in Character Education

THE people of the nation believe that the development of character is the primary function of the schools, and maintain that information is secondary to that important aim. Any assembly of teachers will express deep and often wild enthusiasm over the forceful elaboration of that objective. Obviously, the church and its constellation of organizations are profoundly convinced of the supremacy of character, and business executives who employ young people assure us that the possession of certain traits of character appropriate to industry and commerce is of more importance than technical skill. Over twenty years ago, Dr. Mann's report on engineering education startled us by placing character as the most important qualification of engineers in the opinion of engineering executives.

Yet, in spite of this unanimity of conviction, which I believe to be sincere, we have in this nation a crime situation so serious as to call for a Senatorial investigation, and when the Crime Committee has completed its study, has presented its disquieting statistics and has sought to discover causes, it finds that the schools have not in a substantial degree fulfilled their obligations even though all the blame for the present conditions could not be assessed against them.

This position upon the culpability of the schools I believe to be valid. The schools have made the technical mastery of subjects the objective of education. Teachers in preparation are impressed by instructors with the importance of knowing their fields. Teachers in service judge the success of their students by how well they can pass factual examinations. They are more severe upon lapses of memory and intellectual dullness than they are upon selfishness, laziness or dishonesty, except as they hinder a mastery of facts and intellectual skills. This is a general indictment of the teacher as a type, with due regard to the numerous exceptions that necessarily exist among a million teachers.

Nor is the indictment lightened by the fact that other agencies must share the blame. The primary responsibility for the development of the character and personality of a child rests upon the home, and, if character is not well developed, the home must bear its heavy blame. The church has lost much of its old convictions about right and wrong, and with conviction have gone power and influence. The movies, to which children swarm in millions, are not an elevating influence. In short, a score of social factors share responsibility for conditions as they exist today. Whether these conditions are worse than they used to be is a question which cannot be answered with any satisfactory degree of accuracy. Nor is the question relevant. We are not concerned with whether things are worse than they were; we are interested in making them better than they are.

To make conditions better than they are is not a simple task. Nor is there a single formula that will produce a cure. Every school center will be compelled to use all known methods and modify them to fit into local situations. A dozen factors must be controlled, and scores of methods will be utilized.

Improvement of character and personality must be a co-operative project, experimental in design and persistent in application.

The crucial problem is administrative: We know enough to make saints of devils. When we fail it is because our program is not properly organized and effectively prosecuted.

Elaboration of this position will be worth while on the eve of a national movement to improve the characters of our children.

In presenting this elaboration of the thesis that administration is the central factor in the situation, I do not contend that the analysis that I make is exclusively effective. Rather, it is an illustration of one type of administration that we have found to be effective in local situations and believe will be effective on a national scale.

In carrying on a cooperative project, use should be made of a spearhead organization. This means in effect that opera-

tions should be begun with a few units, a number small enough to be handled with substantial effectiveness. To carry a project through ten departments, it should be begun in one which will do the pioneering and provide the experience. Then, when the selected department has completed the first stage of its project and proceeds into the next stage, a second or a third department may begin. The advance is thus in echelon formation.

The advantages of the spearhead formation are substantial. Experimentation is best carried on in volume so small that the administrator can do a thorough job. His inevitable mistakes are then not costly. He learns from experience how to eliminate waste motions and improve his methods for a second trial. Particularly he can assemble the techniques that have been used and thus provide concrete directions for those units that follow after. In addition, he discovers that personal observation by one unit of another that has already gone through the project, is an extremely powerful method of learning. Infiltration of ideas is thereby put into operation, since those who have done the job tell their associates about their results and the manner of achieving them.

In short, by the use of the spearhead technique, progress is steady, techniques can be assembled for distribution, gains can be consolidated, and the total project be expanded with a maximum of economy and a minimum of waste. There is no question in my mind that the state of the NRA would be vastly better if the government had, or had been able first to perfect codes for the basic industries, as coal, steel, oil and automobiles, and had then in widening circles taken on only as many codes at a time as it could competently handle.

In selecting a spearhead, the most favorable unit should be chosen first. The administrator, as he begins a new project, knows less about it than he will ever know again and therefore should not foolishly or unnecessarily handicap himself by picking the most difficult unit. Moreover, initial failures retard acceptance by associates out of all proportion to their importance. Progressive acceptance is in direct ratio to initial successes. This position is in opposition to that taken by those

adventurous souls who believe that a project should be proven in the situation where the greatest need is present. The better plan is to work upon the most difficult problem when the most experience has been gained.

No unit should be chosen as a spearhead whose chief officer is not right. He must be deeply interested in the project. Otherwise, he will not give it the backing and leadership which is necessary in the inauguration of all new projects. He must have a forceful personality to lead his people when they break with old routines and set up new programs. And he must be persistent, against the time when his subordinates lose their initial enthusiasm and revert to their old patterns of action. No outside consultant or staff officer can carry a project to adequate completion unless he works with a chief officer who has interest, vigor, and persistence. If the chief officer does not possess these qualities, a cooperative enterprise is certain to be a failure.

Superintendent Ballou, in his Washington project, has wisely decided, in my judgment, to select a few schools with principals of the type described, and with teachers unusually interested in the project. In these schools, experience will be gained, results and suggestions will be assembled for use in other units of his system. When he has consolidated his gains in these centers, he can then rapidly and safely expand his program.

To be successful a program must evolve out of the local situation. The business of the administrator is to work with the materials at his disposal and so to build a program that his teachers can carry through. The outside consultant can provide technical experience, but he cannot impose a program. He is the tailor who cuts his cloth to fit the figure. In cooperative projects, there is no place for ready-made plans.

When we consider the local conditions that will be found in any school system that plans a character education project, four are of extraordinary significance.

1. In the first place, teachers know very little about children in comparison with what there is to know. To be sure, they pick up experience and rule of thumb techniques, but they

have not mastered the literature on child psychology or learned what is known about the individual differences and characteristics of children as such. To illustrate, a comparison with medicine is appropriate. The medical student in training spends half of his four years in learning at first hand the anatomy, physiology and pathology of the human body. The teacher in training ordinarily spends not more than ten semester hours on the anatomy and physiology of the human mind, spends no time on pathology, and learns most of what he acquires from a book. Of the springs of human conduct, its impulses, its heredity and its individuality of pattern, he has little first hand experience. The American Association of University Professors is fundamentally right in its contention that the courses in education now offered to prospective teachers are ineffective. Such, however, will not be the case when teachers are as well trained as they will be when teacher training institutions industriously assemble the psychological material now available.

2. Probably because of this lack of understanding of children, teachers are subject minded. The child must learn the subject; the subject need not serve the child. This condition requires no elaboration before this audience. But how to change the attitude of the typical teacher is a crucial problem in carrying on a project which emphasizes the development of personality and the modification of conduct. It can be accomplished partly by exhortation and by in-service training but chiefly by additions to the psychology of childhood in teacher training institutions. For the present generation of trained teachers, the only solution is in-service training.

3. Consequently the administrator finds the typical teacher averse to fitting the course of study to the needs of the off-trail child who is not served by the conventional program. For the so-called average child, teachers do a substantial job when he learns in mass. The delinquent, the genius, the atypical child, he does not like to care for, and from these sources our criminal classes are fed.

4. Then, too, teachers have difficulty in giving that individual attention which character development requires because

of the large size of classes. Guiding and helping children with personality difficulties is time-consuming.

Such local conditions obviously must be taken into account when a cooperative program is evolved. The administrator must work with his materials as he finds them.

In carrying out a cooperative program in a spearhead unit which is developed to suit local conditions, it is essential that participation be voluntary. If interest is lacking, the extraordinary resourcefulness and intelligence needed in prosecuting pioneer enterprises will be lacking, and inhibition will breed sourness toward the project. Infiltration will usually care for the disinterested, and, if it does not, it is preferable to leave the unwilling out of the program. They will do more harm than good.

The efficient administrator who organizes a cooperative job will not be committed to any one formula. He will use everything. It is as disastrous to deny a place to direct instruction as to prohibit indirect instruction. He will use art and social science. He will promote service clubs, invite speakers, and choose literature. Whatever the teachers wish to use should be tried.

But if it is tried it should be measured for purposes of improvement or elimination. An experimental project, of necessity, must be open to any device within the range of reason and possible utility. Teachers differ in ability and temperament, and what proves effective in the hands of one teacher may be futile in the service of another. There is no single formula that can solve the problem.

Obviously, a continuing program involves the in-service training of teachers. As the project develops, it becomes necessary to teach the use of new techniques. And as training advances, the burden of initiative should be shifted from the administrator to the teacher with the ideal of complete maintenance of the program by the teachers when new methods have been mastered and proper attitudes have been developed.

At every stage of the process, evaluation and measurement, objective and subjective, are necessary to satisfy the co-operators that progress has or has not been made. This impartial

view of end results is essential to economical effort. Many projected programs of character development have been found to be detrimental or useless when their effects have actually been measured. May and Hartshorne's studies have debunked several well-advertised activities.

The immediate outcome of a spearhead project, in addition to what is accomplished within the unit, is the assembly of the experience gained in the operation; the post-mortem examination of results, the improvement of techniques, and the distribution of these materials to other units for their guidance.

Then as rapidly as is practical, new units are added to spread the work, but not more rapidly than gains can be consolidated. What the rate of progress will be cannot be foretold. But in the end, over a period of years, an expanding program will evolve, if the objective of the program is socially appealing, if the administration has been effective, and co-operation has been sustained.

These policies obviously do not possess universality. They have, however, been used with seeming success in other areas and present a reasonable basis for initial action in the area under discussion in this conference.

W. W. CHARTERS,
Ohio State University.

The Social Development Program of the Tennessee Valley Authority

THE Act creating the Tennessee Valley Authority provides that the Authority shall be incorporated for the purpose of maintaining and operating under certain provisions the properties owned by the United States in the vicinity of Muscle Shoals, Alabama, in the interest of the national defense and for agricultural and industrial development, to improve navigation in the Tennessee River and to control the destructive flood waters in the Tennessee River. The Authority is also granted certain additional powers, including power to construct dams, reservoirs, power houses, power structures, transmission lines, navigation projects, and incidental works in the Tennessee River and its tributaries, and to unite the various power installations into one or more systems by transmission lines; to produce, distribute, and sell electric power; and to improve and cheapen the production of fertilizer.

The basis for a program of social development lies in Section 22 of the Act creating the Tennessee Valley Authority. This section includes a statement which extends the scope of the Authority beyond building dams and developing power and fertilizer. It reads as follows:

"To aid further the proper use, conservation, and development of the natural resources of the Tennessee River drainage basin and of such adjoining territory as may be related to or materially affected by the development consequent to this Act, and to provide for the general welfare of the citizens of said areas, the President is hereby authorized, by such means or methods as he may deem proper within the limits of appropriations made therefor by Congress, to make such surveys of and general plans for said Tennessee basin and adjoining territory as may be useful to the Congress and to the several states in guiding and controlling the extent, sequence, and nature of development that may be equitable and economically advanced through the expenditure of public funds, or through

the guidance or control of public authority, all for the general purpose of fostering an orderly and proper physical, economic, and social development of said areas; and the President is further authorized in making said surveys and plans to cooperate with the States affected thereby, or subdivisions or agencies of such States, or with cooperative or other organizations, and to make such studies, experiments, or demonstrations as may be necessary and suitable to that end."

It should be pointed out that this section of the Act grants powers to the President of the United States, and not to the Tennessee Valley Authority. On June 8, 1933, however, the President gave the following executive order:

"In accordance with the provisions of Section 22 and Section 23 of the Tennessee Valley Authority Act of 1933, the President hereby authorizes and directs the Board of Directors of the Tennessee Valley Authority to make such surveys, general plans, studies, experiments, and demonstrations as may be necessary and suitable to aid the proper use, conservation and development of the natural resources of the Tennessee River drainage basin, and of such adjoining territory as may be related to or materially affected by the development consequent to this Act, and to promote the general welfare of the citizens of said area; within the limits of appropriations made therefor by Congress."

The President's conception of the social and economic aspects of the Tennessee Valley development are expressed in his message to Congress accompanying the submission of the Bill to create the Tennessee Valley Authority. The following statement appears in this message:

"Many hard lessons have taught us the human waste that results from lack of planning. Here and there a few wise cities and counties have looked ahead and planned. But our nation has 'just grown.' It is time to extend planning to a wider field,—in this instance comprehending in one great project many states directly concerned with the basin of one of our greatest rivers. This is in a true sense a return to the spirit and vision of the pioneer."

All divisions of the Tennessee Valley Authority are working toward a planned social and economic development for the Tennessee Valley. I shall limit my discussion, however, to

those aspects of the program for which I have been given administrative responsibility.

PERSONNEL POLICIES

The personnel policies of the Tennessee Valley Authority are so closely related to certain aspects of the social development program that it seems advisable to comment briefly upon this point.

Because of the serious situation existing with reference to unemployment, it seemed advisable to provide some means of spreading employment. To accomplish this purpose, men working on the dams were placed on a thirty-three hour working week, each man working on a single shift of five and one-half hours each day for six days each week. While this plan assists in solving the problem of unemployment, it makes more difficult of solution the problem of providing for the utilization of the leisure time of the employees. This is a problem which arises in connection with all construction activities where large numbers of men are assembled together away from their homes and families. The Tennessee Valley Authority accepted the responsibility of attempting to solve this problem, which had been made more difficult by its own labor policy of spreading employment. The best solution seemed to be along the lines of developing a training program. Consequently, such a program has already been established at Norris, the new town built to accommodate laborers on the Norris Dam. It is hoped that the training program may assist in developing leadership among the laborers on the various projects who, after construction jobs are completed, may be expected to return to their homes qualified to cooperate in the social and economic development of the Tennessee Valley rural communities.

After the decision had been made to develop a training program, it seemed advisable to select as laborers men who were not only qualified for labor jobs, but who were also best qualified to benefit from the advantages offered. As a means of selecting these men, an examination, consisting of a mechanical aptitude test, a test of ability to follow printed instruc-

tions, and a test of ability to follow oral instructions, was administered by the Personnel Division in cooperation with the Civil Service Commission, to almost 40,000 men in 138 examination centers. Part of the examination and examining procedure was especially designed for those men who have not had the advantage of a formal education, even to the extent of not being able to read or write. It should be understood that the examination is not the only basis for the selection of employees. It has merely given an additional check on applicants. Personal interviews and other methods ordinarily employed are also used in the final selection of all employees. At the present time, after there has been ample opportunity to check on the quality of the labor group selected, there is almost universal agreement that the method of selection is superior to those usually employed.

Another function of the Personnel Division closely related to the social development program is the study of problems pertaining to labor conditions, wage rates, violation of labor codes, and the relationship between the Authority and organized and unorganized labor groups. Through the organization of committees the Labor Relations Section of the Personnel Division is attempting to bring about a realization that the success of the Authority depends on every man doing his job to the best of his ability, that the Authority is open to suggestions from the man on the job and willing to work out problems with him.

THE TRAINING PROGRAM

As stated before, one of the reasons for having such a careful plan for the selection of employees is because of the training program for workmen. This program is already under way at Norris, in Tennessee, and plans are now being formulated for the development of a similar program on a smaller scale at Wheeler Dam, in Alabama. There are four shifts of five and one-half hours each for men working on the dam construction job. The training program is being developed to dovetail with the construction work on the town and dam. This program is entirely voluntary, and is so organ-

ized that those workmen interested in securing training may do so in their spare time. In some cases, however, training is given on the job.

The aim is not to give training of the type which would fit people to go out into the industrial life of cities and compete in already overcrowded professions. The aim is to give training in the various types of rural occupations and industrial enterprises which may appropriately supplement the agricultural life of the Valley. When the construction job is finished, those who have participated in the training program should be better prepared for life in rural communities, and better able to support themselves and their families.

In addition to serving as training centers, the training projects are also service enterprises. For instance, the garden farm is furnishing vegetables for the camp, the poultry farm is furnishing eggs, and the dairy center the dairy products. The shops are the service centers for the construction projects, and training is given in connection with the service enterprises that are a necessary part of the construction of a dam. Those in charge of the projects combine the ability to manage the operations on a practical economic basis and to instruct those in training.

In connection with the agricultural training program, several farm and occupational demonstrations, which serve as centers of training, are being developed at the town of Norris. A poultry plant has been designed to demonstrate the operation of a small poultry enterprise as a rural occupation. The instruction is altogether practical, and the men assist in all phases of the poultry work. Under the direction of the person in charge of the plant, they receive instruction and gain experience in mixing feeds, trapnesting, candling and grading eggs, building brooder houses, mating, treating sick birds, vaccination, and general care of the poultry house.

At the edge of the Construction Camp about fifty acres of land have been set aside for a garden which is being developed as a training project, a demonstration for the farmers of the area, and a source of part of the food supply for the camp cafeteria. It is a somewhat unusual opportunity for study and

observation for both those interested in raising vegetables for their own use and those who want to do truck farming. In addition to learning how to grow vegetables successfully, training in marketing procedure can be secured in connection with a central food market, where garden produce from the surrounding community can be stored, graded and prepared for marketing. It is hoped that this phase of the agricultural training program will encourage farmers of the area to grow numerous vegetables and small fruits which are now shipped in from other sections of the country.

Just getting under way at the gardening center is a plan of work-training which, as yet, is unique among the training projects at Norris. About five acres of land have been set aside to be divided up into twenty small plots, on which individuals interested in gardening may grow vegetables of their own. The land is prepared by the garden helpers, the seed is furnished, and the work is done under the direction of the person responsible for garden training. The crop is divided between the garden center and the person who does the work.

On the general farm, instead of the usual corn crops, major emphasis is being placed upon the growing of hay and grass crops as a method of checking soil erosion and as a feed basis for a small dairy herd. Associated with the farm there is to be a pasteurizing plant which will furnish the dairy products needed by the town of Norris. This dairy plant will also serve as a demonstration for farmers of the local area and will give them a ready market for their products. About twenty-five men are now taking training in dairying and about twenty are enrolled for creamery instruction. Classes in dairy manufacture covering the actual work carried on in the pasteurizing plant are also being organized. At present the work is presented in the form of classroom lectures. As soon as the dairy herd arrives and the pasteurizing plant has been completed, all of the training will be given directly in connection with the actual work of operation. Instruction in dairying will include study of the various breeds, adapting particular breeds to specific localities, judging cattle, feeding, raising of pasture crops, and general care of the herd.

Instruction in the planning of farm buildings, landscaping, adaptation of crops to various types of soil, demonstration of soil erosion control, stock breeding, care, use and maintenance of farm machinery and conveniences, the utilization of available farm agencies, and general principles of economy and management are also features of the agricultural training program.

Trades training is being carried on in four main shops: woodworking, automotive, general metal, and electrical. All training work is to be connected directly with shop work. The individual will be placed on a given machine until he has mastered its operation, then shifted to another. Laborers are being taught how to read simple drawings. For the first few weeks the staff was occupied almost entirely with the construction of various pieces of equipment for the shop building—work benches, tool cribs, book cases, and classroom benches. Other jobs such as tables for the tourist camp, tables and benches for the Recreation Building, writing desks for one of the dormitories, and screens for the farmhouses have been undertaken. It is interesting to note that older men comprise a large part of the group. They have had considerable experience in carpentry and are now anxious to learn cabinet-making and drawing.

The automotive shop is equipped to do all types of automotive service work. It operates twenty-four hours a day throughout the week. According to present arrangements the trainees spend between forty-five minutes and an hour each day receiving theoretical instruction. The remainder of the two-hour period is devoted to practice work in the shop. An encouraging fact is that each day a number of men, at the end of their regular periods, stay for an additional two hours of practice.

Centering about the operation of a forge, foundry, machine shop, and a sheet metal shop, all a part of the general metal shop, men may learn blacksmithing, welding, wrought iron work, and related skills. Approximately ninety men are coming to the general metal shop daily for instruction in the form of lectures and actual shop work. Most of the work to date

has been the rebuilding and installation of equipment for the various shops. A major part of the equipment was secured from the war-time stock at Muscle Shoals and has been repaired and rebuilt for use at the Norris Trade Shops.

Of the various parts of the trades training, the most popular is the electrical shop work. At present approximately one hundred and ten men attend regularly on four days each week. Among them are a number who are totally inexperienced, some electricians on the job, and one electrical engineer. Certain elementary principles of electricity, wiring, and motors are being taken up in preparation for the practical work in the shop. One of the first practical projects undertaken will be the installation of permanent conduits and connections. When proper equipment arrives, this shop will be able to do service work for the Construction Division at Norris and the dam on the repairing of meters, transformers, motors, and like electrical equipment. An important phase of the electrical shop, in addition to providing training in occupations where electrical knowledge and skill are essential, is the dissemination of general information regarding the efficient use of electricity and the proper care and operation of electrical equipment.

By special arrangements with certain colleges of the Tennessee Valley area, extension courses may be given in fundamental and related engineering subjects. Instruction in engineering practice directly connected with agriculture will also be offered. A limited number of students from certain engineering colleges having cooperative programs are now dividing their time between periods of study at their own colleges and periods of work on Tennessee Valley Authority projects. Classes in engineering mathematics are held for Tennessee Valley Authority employees in Knoxville, LaFollette, and Norris, all in Tennessee. Initiated by the men at LaFollette, a meeting is held once a week to discuss general engineering problems. About seventy-five men came in from the field stations in that vicinity to attend these meetings. The more experienced men give explanations of actual field problems, and the men discuss among themselves various phases of their work. Classes in advanced and elementary drawing, arith-

metic, algebra, and elementary geometry are also available at Norris, the number of men interested in each varying from ten to fifty. Much of the instruction in the engineering training program is by contributed services of staff members.

One of the most interested groups participating in the training program at Norris is the so-called work-study group. Each person in this group is assigned to some particular job on the dam for a month. At the end of that time he is transferred to another group. According to this plan, the individual may work for a month in a pipe-fitting gang, the next month in a rock quarry, a third month on the coffer dam, and so on until he has gained experience in a great many phases of the Authority's construction activities. Along with their work, these men meet twice each week for special study in fields directly and indirectly related to their jobs.

As the need for specific training of other types arises, provision will be made to care for it. Studies are under way to determine where there is a shortage of skilled labor in specific trades in order that training may be provided. For example: Recently it became necessary to have well-informed guides and guards at Norris, inasmuch as there are so many visitors and new people there at all times. A training program for guides and guards was instituted and the selection made from those who took the training.

Possibly I have laid undue stress on the vocational aspects of training as a part of the program for social development. The training program, however, is not limited to vocational fields. In addition, a general adult education program is also being developed. Classes in natural science have already been organized. Lectures, demonstrations, group discussions, reading programs, and the like, constitute the means of stimulating and assisting in the development of interest and information in various fields of study. In the training of leaders, such a program seemed essential. This work will be carried on largely by contributed services of interested staff members.

The women are not to be neglected in the training program. On the training staff is a supervisor of home planning and management who will conduct classes in homemaking for those

interested. There is a demonstration home that is to be completely electrified where such instruction will be given. Assistance in solving actual problems in the home is also planned. It has seemed particularly desirable to have such assistance available inasmuch as many problems will arise in connection with the use and care of electrical equipment. The use of electricity may be expected also to decrease the time needed for housekeeping. This will give housewives an opportunity to supplement the family income by engaging in certain types of home industries for which training may be given.

The supervisor of home planning and management is co-operating closely with the Electric Farm and Home Authority, a subsidiary of the Tennessee Valley Authority, in its educational program. Recently a group of electric home representatives received training in Knoxville before beginning their task of showing the housewives and farm women of the Tennessee Valley how to get the most from electricity.

Wherever groups are brought together on construction projects, educational facilities for the children must be provided. The plan for Norris is to construct a building intended to serve as a demonstration of a well planned rural community school. The plan involves securing the best educational facilities possible at a relatively low construction cost. The work of the school will be closely coordinated with the training program for adults. For example, instead of making provision for teaching agriculture and manual training in the high school, students interested may secure such training in the shops and on the farm.

HEALTH AND MEDICAL PROGRAM

Another important part of the social development activities relates to the health and medical program. The Tennessee Valley Authority is directly concerned with this problem. The physical welfare of man is a basic element in any program of social development. Viewed from the standpoint of economic welfare, the resources of society are of two kinds, natural and physical. Natural resources are fixed and limited, but physical resources, which constitute vital capital, vary with

the physical well being of the population. Since the sum of natural resources is fixed, while the sum of vital capital varies with physical effectiveness, the conclusion is apparent, i.e., the sum of usable wealth is the result of the reaction of vital capital upon natural resources. The total of usable wealth depends, therefore, upon the effectiveness of this reaction.

In the beginning of its program, the Authority recognized the truth of these premises and is now projecting the medical service for employees in such a manner as to make possible the development of more effective methods of health protection. Each employee is given a physical examination at the time of employment, or as soon thereafter as possible, and is then classified for the character of work that his physical condition will permit him to perform effectively and without danger to his health. Rejection is only for physical deficiencies of a nature so serious that they would render labor dangerous. Men with such deficiencies are the so-called "unemployables." Even among this class, correction of physical deficiency may return a certain percentage to the employable class. Because the condition of an individual is made known to him after examination, he is enabled to seek correction through the usual channels of medical service. The other and less extreme classes of physical defectives are given employment not hazardous for the physical condition in which they are found, and are advised as to the kind of treatment necessary to restore them to a more nearly normal physical state.

Quite aside from this vocational guidance and physical rehabilitation, ultimately much information will be available from analysis of the mass of data secured during the performance of routine service. Already certain detailed studies have been indicated by the observations made. For example, in one area the problem of endemic goitre seems to be important, while in another area malaria will need to be studied and controlled. As work progresses, re-examination of employees will be made and improvements under changing conditions will be observed. The information secured in this way will present an opportunity seldom equalled, for the analysis

of data obtained from a representative sample of male population.

As work advances and the development of special projects becomes possible, studies may be extended into new fields as yet inadequately explored. For example, research in the field of mass prevention of disease should be an area offering special opportunity and one in which the Authority appears to have an unusual opportunity. Since the Tennessee Valley Authority is not charged with routine duties in the control activities that press so heavily upon state and local agencies of government, it can work with and through these agencies in studies designed to secure information essential for more specific control measures. Moreover, such studies can be correlated readily with similar studies of the Authority in education, economics, government and related fields. Interesting examples of such opportunities are studies of effective methods for individual and group health education and studies of basic needs in rural health organization.

COOPERATIVE SOCIAL STUDIES

Recommendations for social changes, to have fruitful results, must rest upon a sound basis of factual information. Workable social and economic theories cannot be created out of thin air. Information of a wide variety of types is essential. Particularly this involves the compilation of basic data in all of the social science fields. I am of the opinion that such studies will be most successful if set up as cooperative enterprises in which agencies such as colleges and universities, and state and national governmental departments participate. With this thought in mind, a conference was called in December, 1933, of thirteen representatives from Southern educational institutions, research associations, and governmental departments, for the purpose of planning a program for the compilation of basic data to be used in social and economic planning in the Tennessee Valley area. This group suggested a number of topics for investigation. Other topics were suggested by members of the staff of the Tennessee Valley Authority. The studies that seemed most worth while, both from

the point of view of the needs of those cooperating, and of the needs of the Tennessee Valley Authority in its program of social and economic development, were selected for study. The work of compiling basic data was started immediately by some four hundred workers employed through the Civil Works Administration. The immediate supervision of these workers was cared for by staff members of the institutions, research associations and governmental departments represented at the meeting. The general organization of the program of study was assigned to the Social Development Division of the Tennessee Valley Authority. As a result of the organization set up, data have been compiled on a number of projects, and the findings are now in the offices of the Authority. The subject matter of these various projects can be classified under the headings of education, government, economics, and sociology.

Studies were inaugurated dealing with the entire educational system of the State of Tennessee. Dr. Cocking, the Commissioner of Education, was asked to serve as adviser in connection with these studies, since he is also Chairman of the Tennessee Educational Commission, appointed to survey the educational needs of the state. The needs of the Educational Commission were given careful consideration in planning the educational studies. The data compiled constitute a valuable source of information for the use of the members of this Commission in the preparation of their survey reports. Educational studies of somewhat more limited scope were made in some of the other states of the Tennessee Valley.

In government, a number of studies of taxation, the system of paying officers through fees, the cost of administration of the Courts, the use of the electoral privilege, special legislative acts, the possibility of county consolidation, and county finance were made.

In the field of economics, real estate inventories, marketing surveys, agricultural studies, the trends and development of various types of business, as well as a number of other topics were investigated.

In the field of sociology, the studies have taken the form of

investigations of topics such as living conditions, slum areas, and sub-marginal areas.

Some of the studies that have been completed have been made available to the public by the men and agencies that have conducted them. While the Tennessee Valley Authority is interested in the data assembled and in the findings, it served primarily as a coordinating agency and, consequently, is not prepared to assume responsibility for the findings or the recommendations based upon them.

CONCLUSION

In this discussion I have dealt only with that part of the social development program for which I have some administrative responsibility. Similarly, other divisions are concerning themselves with problems looking to the social development of the Tennessee Valley. The success of the social development program depends upon cooperation with existing agencies, national, regional, state, and local, both within and without the Tennessee Valley.

FLOYD W. REEVES,
Tennessee Valley Authority.

Emotion and the Educative Process

WHEN the term emotion is read or heard in educational circles the immediate response of many persons is to something unpleasant. They think in terms of fear, anger or some unpleasant aspect of sex. Such limited concepts, however, do not underlie the "Exploratory Study of Emotion in the Educative Process" now being undertaken by the American Council committee operating under a subvention from the Josiah Macy, Jr., Foundation. We are planning to delve into much wider and perhaps more obscure areas of human psychology.

In the Inglis Lecture at Harvard University this year, Professor Kandel said that a major problem of secondary education, indeed of all education, is to find a moral equivalent of Fascism and Communism with which to fire American youth. It is entirely true that, under the pressure of modern economic, social and industrial conditions, our democratic institutions are undergoing an inevitable evolution. Then some strong positive motivation which may effect this self-repair under a democratic government and within the frame of our democratic ideals is needed. Our committee will try to discover what hope we have of producing the deeply felt desires that must underlie constructive social purposing by youth. It is not that we expect to discover and propagate any panacea, but rather that we hope to point out neglected opportunities for experimentation and research in utilizing the schools and other educational agencies to establish the dynamic that underlies purposeful behavior.

But the possibility of an enormous challenge to feel and to act positively is not found only in social, political and economic problems. The emotional basis of aesthetic and cultural experiences needs likewise to be canvassed. It can hardly be said that contemporary American schools reflect any strong desire on the part of our population for a rich and full life expressed in cultural or aesthetic terms. There seems indeed

to be an almost virgin field here for education to use in enriching and deepening the emotional or feeling side of life for our people. We expect to be able to point out practical instances where something is already being done, and we hope to suggest a great variety of experiments that may lead to fruitful public school work in these areas.

The significance both of constructive social motivation and of a richer aesthetic life for young people is instantly apparent in relation to increased leisure, in relation to problems of juvenile delinquency and to numerous problems of mental hygiene.

But the committee can scarcely limit itself to a study of the inspirational, aesthetic or cultural phases of emotional life, even though it discover here relatively undeveloped areas. The frontiers of scientific knowledge about the physiological bases of the emotions in the diencephalon, in the autonomic nervous system, and in those intriguing hormones released by the endocrines must be pushed back.

The work of Dr. Cannon of Harvard and of Dr. Philip Bard of Johns Hopkins in locating the seat of neural control of the emotions in the thalamic section of the brain and in demonstrating the increased emotionality of decorticated animals is highly significant. With a better understanding of the function of the various parts of the brain in emotional states, we may find many suggestions for experimentation in *disciplining* specific emotional relations by cortical learning. In this we shall doubtless find many suggestions from clinical psychiatrists too.

The measurement of qualitative differences in emotional states, as well as of the intensity of emotional reaction, must be examined. Dr. Lund of Temple University has been commissioned by the committee to undertake an exhaustive study of the literature and thought in this field, and his findings will be scrutinized with the utmost care by the committee to locate leads for fruitful research. Preliminary to the development of any extensive program of experimentation for public education, the committee feels that it must know exactly the scope

and trustworthiness of the various measurement techniques by which such experimentation can be evaluated.

The literature relating to many additional technical problems involving the emotions must also be gone over in order to determine what are now the limits of our knowledge and to develop ideas for further research. Among these psychological problems are the following:

(a) What is the influence of emotion upon motor coordination and upon motor habits, including speech?

(b) What is the influence of emotions upon the intellectual processes of learning, reasoning and imagining?

(c) How far are the patterns of emotional behavior trainable? Do children develop emotional "appetities"? What is "emotional maturity"?

(d) What is the part played by emotion in establishing specific behavior goals and in conditioning the "personal values" that underlie long continued sequences of related action?

(e) What is the part played by emotion in mental conflicts? What is the relation of this to mental disorders in children and young people? What is known about the diagnosis and remedial treatment of these functional disorders?

School people will benefit greatly if our report can stimulate extensive research bearing upon these and subsidiary problems. The facilities of laboratory, clinic and school will all be needed, and an important contribution of this exploratory study will be to indicate the significance of the work of each for the others and particularly for school practice.

A troublesome problem to which we shall devote a section of the report is sex, for it cannot be denied that sex involves an emotional background of positive desire that is universal. Our society has attached strong taboos to it, which means that there are numerous points where conflict, frustration, or a sense of guilt come to people. Again, profit-motivated elements in society use sex as a continuous lure: witness advertising, motion pictures, certain publications and theaters; so that sex is practically inescapable even apart from personal relations. Probably the committee will be hard put to it to find fruitful and practicable experiments to suggest to schools, and it may be that the ones developed will be more in the field

of sociology than psychology, but this problem must certainly be studied. In this the committee is not committed, or addicted, to any special school of thought, and hopes for suggestions from all directions.

In the matter of studying the emotions of school children we foresee numerous interesting aspects of the problem.

(a) What are the emotional orientations of children entering school? Which are innate and which acquired? How shall we discover the emotional orientations of entering pupils?

(b) What is the maturity of emotional control of children entering school? How much of the maturity of control found is genetic and how much is due to experience and adaptation? By what means may the process of "maturing" emotionally be fostered?

In order to answer any of these questions we certainly need further research and it is our hope to make specific suggestions after studying what has already been done.

Then there is a particularly important matter, a constant or fluctuating influence upon all children as they pass through the schools. It may be termed the "emotional climate" of the school. To study this is to evaluate the pleasantness or unpleasantness of school experience for children, the opportunities which arise for natural emotional expression and for basic personal and social satisfactions, the extent of inhibition of normal reaction and the extent to which opportunities for satisfaction are denied. Some little bit has been written about this matter of the emotional climate of schools, but it is our impression that it has not been widely studied scientifically. Elements of particular importance affecting it appear to include the following:

(a) *Teachers.* Their influence seems to be determined by parentage and home background, training school experiences, understanding of children, conditions of life during professional service, financial and occupational security, temperamental incompatibilities with superiors or with certain pupils, routine elements of their tasks, opportunities for initiative, professional philosophy, recreational opportunities and perhaps many other factors.

(b) *The Nature of the School Tasks.* Among the perti-

nent factors here are: lack of relation to children's experiences, frustration of curiosity, lack of continuity and integration among school tasks, linguistic emphasis, use of artificial motivation, limitation of activity, interruption of motivated activity, exposure to repeated failure, suppression of inventiveness and creative expression, neglect of aesthetic material and lack of a sequential development of meaning to life.

(c) *Conditions of School Operation.* A superficial analysis reveals the following possible influences among many: regimentation, the normative measurement of success without relation to capacity, arbitrary regulations regarding tardiness, absence, or discipline, mass instruction and lack of diagnostic measurement of academic difficulties, the juxtaposition of incompatible personalities.

(d) *Relationships among Pupils.* A few of the many influential factors are: unsupervised play, bullying and teasing, bad leadership, imparting of mistaken, biased or undesirable concepts, contact with delinquent or unstable personalities, hysterical or imitative epidemics, admiration of spectacular exploits, and so on.

From this rapid analysis it is apparent that the emotional climate of a school is a difficult thing to study, tangible as its influence upon the personalities of the pupils may be. This climate is not an identical matter for all children in a given class. For example, a particular child may be extremely sensitive to sarcasm, to praise or to some other element of the pupil-teacher relationship because of earlier experiences in other classrooms. If we can increase the awareness of teachers and administrators of the pervading effects of emotions upon learning and upon character growth, I am sure that we shall stimulate an enormous amount of thoughtful variation in school procedures from which much good will come to children.

Finally we have to deal with what I call "emotional deviates." In every school there are children whose emotions are so intense or so persistent that they cannot adjust themselves to the conventional routine of the school. Sometimes they are merely a menace to the orderliness and efficiency of the school, but sometimes they endanger the adjustment and even the safety of other children. Naturally we are equally concerned with the personality adjustment of these deviates

and with their influence on other children. While research in the etiology of such emotional aberrations must be undertaken by psychiatrists or by psychological specialists, the remedial treatment cannot be effective unless the school and the home are intelligently cooperative.

Most of our present special classes for atypical children are adapted to cases of border-line mentality or high grade feeble-mindedness but are ill-equipped either in curriculum or procedures for the re-education of more intelligent problem children. The latter must always be treated with the purpose of returning them to a fully self-directing adjustment to school routine and to social living. We have made little provision for this. Our mental hygiene clinics can only study the causes of the maladjustments, make suggestions for gross readjustments in the life of the child and try to bring about a sympathetic understanding of him on the part of parents and teachers. Recent studies by Glück have shown that this is not enough, for a large majority of juvenile delinquents are found to persist in this delinquency even after the most thorough diagnosis and treatment at the Judge Baker Foundation or other similar agencies. Your committee will look for experiments already carried through or for suggestions for new ways of handling problem children in schools so that the impact of remedial measures or of improved environmental influence may not be limited to clinical contacts alone. We feel that very fertile ideas may emerge.

In general, then, our study of emotion and the educative process will follow the intent of the grant—it is to be an exploratory study. We shall summarize and coordinate the knowledge that is now available, we shall point out the problems that remain critical to further progress, and we shall suggest research and experimentation that may be expected to give further information or to develop procedures for meeting these problems.

DANIEL A. PRESCOTT,
Rutgers University.

The National Institution of Public Affairs

RATHER than spend the full period with my talk, I have suggested that the members of the Council may care to ask questions regarding the Institution's plans. I shall therefore be glad to answer any queries you choose to submit at the conclusion of my remarks.

Last December the suggestion was made by a member of the National Administration that a training in the practical operations of government be offered to those college students and graduates who have made an academic study of politics and government and affiliated fields.

This was not a new suggestion, for it has been found in as old a document as the last will and testament of George Washington, but last December's proposal was accompanied by a definite plan for the realization of that universally commended idea.

As the combined result of that proposal and the wisdom of educational authorities on public service throughout the country, the National Institution of Public Affairs has been established. Students will be brought to Washington next February to enjoy the benefits of the Institution's first training and study of the practical and human elements of government and politics, a working knowledge of which is so important to success in the field of public service.

Sponsored by the National Administration and enjoying the cooperation of the Federal Government, the National Institution is, however, a self-governing and independent institution of non-partisan and non-political nature which is privately financed and apart from political or governmental control in any way.

The Institution's Trustees, who were selected by and from the Advisory Board, are Eugene Meyer of Washington, Louis Brownlow of Chicago, and former Governor William E. Sweet of Colorado. The Advisory Board also includes Major John S. Cohen of the *Atlanta Journal*, Mr. Edward A. Filene of

Boston, Dr. Anson Phelps Stokes of Washington, and Dr. Mary E. Woolley of Mount Holyoke College.

The educational program and activities of the Institution are under the supervision of the Educational Committee, which is chairmaned by Dr. Arnold Bennett Hall of Brookings Institution and includes Dean Clark of Yale Law School, Dr. Mann, Dean Shepard of Ohio State University and Dr. Splawn of the Interstate Commerce Commission. Under the supervision of the Educational Committee a full-time Educational Director, yet to be appointed, will have charge of the Institution's educational activities.

Next fall college-trained men and women of four levels will be selected for the Institution's program of next winter—juniors, seniors, graduate students and recent graduates. They will be appointed upon the following basis: strong scholastic standing; a demonstrated interest in politics and government; and qualities of character and ability, particularly those having to do with leadership.

The students thus appointed to the National Institution's scholarships will be brought to Washington for two months, according to the plans for the first year, which will start their study on February 1st.

Translating an educational feature from the fields of engineering and medicine into the study of public affairs, the National Institution will in its program emphasize an internship on the part of each student in actual governmental service.

Just as an engineering student carries on much of his study in the laboratory and the academically trained medical student works in his laboratory and serves an internship before engaging in actual practice, so will the students appointed by the National Institution pursue an internship in the career of their choice, government.

As if they were permanently employed, they will serve as administrative assistants to governmental officials in the higher brackets, in a combination of service and instruction received in their pursuit of individual case problems to which they will be assigned.

With that emphasis on the internship idea, the program of

the Institution will include talks and forums led by governmental officials themselves, observation of the actual workings of the government and analysis of the material evidences of the various units and functions. In addition, the program will be coordinated by periodic discussion groups led by a small number of social science professors who shall be selected to come to Washington on leave of absence from their respective colleges for the duration of the Institution's program.

I should feel remiss in gratitude were I not to acknowledge a deep appreciation of the splendid cooperation which the American Council on Education has so graciously afforded the establishment of the Institution.

Fortunately, the last few years have seen a changed attitude toward activity in politics and government. Those people, who previously scorned it, now have a greater respect for public service. Undoubtedly this has been brought about mainly by the economic depression, together with its resultant closer relationship between government and the world of business and finance.

Consequently we have seen the entrance into the field of government and politics of many men who have had splendid academic training, but who have lacked practical experience and contact with the actual forces of public affairs.

It is our belief that we can to some degree remedy this situation by providing an opportunity for training in the practical operations of government as nobly supplementing academic preparation; for, regardless of the economic system or political plan which the future may hold for America, whether it be capitalistic, socialistic or otherwise, it is an evident truth that we shall need trained men for the administration of government and management of politics. As a "laboratory of public affairs," the National Institution intends to develop such trained men.

OTIS T. WINGO, JR.,
Executive Secretary.

Citizens' Councils for Constructive Economy

I BELIEVE it was the new president of Williams College who in his recent book on John Hay said, "A state of mind is as formidable as a fortress." Josh Billings perhaps put the same thought into cruder expression when he drawled, "It aint ignorance that hurts so much; it's folks knowin' so confounded much that aint so!" In discussing Citizens' Councils, we are dealing with the product of education after it has been fashioned, we are dealing; that is, with the adult. His ignorance in matters of government and community operation is abysmal but it isn't his ignorance that matters: it's his knowing so many things that aren't so that act as obstacles to intelligent action. When we talk Citizens' Councils we are talking about a device which may enable us to hurdle some of these obstacles.

When the American Council on Education met in Washington a year ago, the Citizens' Council program had just been born. It was the offspring of depression. Those were dark days. Shortly before, a group of citizens had met in Washington at the call of the President of the United States to consider the crisis in education. Members of this group had been selected by national organizations representing agriculture, business, government, education and public welfare. Because of the fact that education was essentially a local governmental problem, it was realized that local action was the first step in any solution. One of the findings of this conference, therefore, was the recommendation that there be set up in each community a Citizens' Council broadly representative of all interests to clarify and mobilize public opinion in matters of vital community concern. This suggestion attracted wide attention and, following a series of conferences, a committee representing more than fifty national organizations was set up under the National Municipal League for the purpose of stimulating organization of local Citizens' Councils.

In brief, a Citizens' Council, as originally conceived, was an effort to mobilize civic energy and intelligence around a table to focus on the problems of the emergency. Such councils were formed by selecting outstanding personalities in the various civic organizations and groups of the community. Their purpose, in a phrase was, "constructive economy"—that is, maintenance of essential community services in the face of reduced expenditures which meant the elimination of waste in governmental organization through reorganization of structure and improvement in administrative methods.

It is one thing to launch an idea into space; another to have it translated into action. There is not time here to tell the full story of how this was done. Suffice to say that as a result of radio, publicity in newspapers, magazines, and professional publications, considerable speaking, conference and organization field work, within a space of a few months, the Citizens' Council idea caught the imagination of leaders in city after city. Today more than 150 such councils testify to the practicability of the idea.

The fact of the existence of these councils is in itself significant. Most American communities are over-organized. Too many of these organizations work along in their own pigeon-holes with little consideration or thought for their neighbor organizations which are doing likewise. It is high time some of these partitions were removed. It is high time there was some coordination among the various groups. The whole picture needs to be seen. If the Citizens' Council idea had done nothing more than stimulate such coordination, it would have justified itself.

But from the broader standpoint, a Citizens' Council must be judged by its achievements. Have these local councils after organization done anything worthwhile? That is perhaps the question we should consider here. Most of the councils were formed in a period when local government in the country was being subjected to terrific pressure from all sides. First, there was the demand and perhaps the necessity for reduction in expenditures—demand from organized taxpayer groups hard hit by the depression—necessity due to delinquent taxes and

the literal impossibility in many communities of raising sufficient funds locally to keep governmental expenditures at their pre-depression level.

Second, there was the opposing pressure from public employees and their families who knew that reduction in governmental expenditures meant salary cuts or dismissal, since half the money spent by local governments is spent for salaries.

Third, there was the opposing pressure from private business interests that gained when government spent—construction men, contractors, cement manufacturers, asphalt producers, and all the rest of the multiple business concerns in this country whose livelihood depends, by and large, upon maintenance rather than reduction of governmental expenditures.

And finally, there was opposing pressure from unselfish groups—the men and women who had been devoting their time without remuneration to educational, cultural and social agencies. Those interested in the school system would fight any drastic reduction in the budgetary allowance for schools; those interested in the public library would seek to maintain adequate budgetary allowance for library services; those interested in public recreation would point out that in times of widespread unemployment, more rather than less should be spent; the public health people would point to the danger of curtailing public health expenditures in this emergency when hunger lowers human resistance to disease; those interested in public welfare work needed no argument—the long lines of unemployed told their story more dramatically than could hours of oratory.

These councils, therefore, were facing no theoretical problem—no problem in a vacuum. The needs which governmental services fill are continuing needs. Stop the supply for one moment and the social or economic wreckage is fearful. This is no exaggeration and may be readily perceived. Picture what would happen in New York City if no food were forthcoming for the millions of unemployed for even so short a period as three days. Picture what would happen in Chicago if the water system were shut down. Picture what would

happen in any one of our large cities if there were no fire department or police department for forty-eight hours.

To visualize what follows the closing of schools is less easy. But we know that education is a continuous process—we cannot give a child a double amount of education tomorrow to compensate him for that of which we are depriving him today. And the closing of libraries—who has a measuring rod for loss of morale? For only he could determine the extent of damage done by curtailment of library services to the millions of unemployed who are using these services to help bolster up their spirits and better equip themselves for the new job when it comes.

It was this situation into which the local Citizens' Council had to step and function.

In the southern states, where hundreds of schools had been forced to close before the term ended last spring and where the prospects were that a very large number of these would not be able to open in the fall, the chief emphasis of Citizens' Councils has been on awakening the people to the necessity of an adequate support of education. In Mississippi, North Carolina, Arkansas, and Alabama the State Congress of Parents and Teachers together with the State Department of Education urged other organizations to join with them in promoting the formation of local Councils.

In Alabama forty-two county Citizens' Councils were formed by the end of last May. Of all the southern states the schools of this state were suffering most. Approximately one thousand of the rural schools had been unable to open their doors to ninety thousand children after the Christmas holidays, and more than half the rural schools and many city schools had to close before completing full terms.

Four warrant and income tax amendments to the state constitution which would liquidate the state's floating indebtedness and make money available to the schools were to be voted on in the July election. It was a time for quick action. The county Citizens' Councils put on an intensive, state-wide campaign. Posters were prepared, council members made house-to-house calls, the councils provided speakers, used the radio,

and wrote letters to leading citizens in which they pointed out the importance of passing the amendments.

The amendments were carried overwhelmingly though the opposition was powerfully organized and one, the income tax amendment, had been beaten less than a year before by a vote of two to one. The schools—most of them—were open in the fall.

In this campaign was demonstrated the need of a central agency which could gather facts and present a unified plan of action for all of the county councils, and thus in the late fall there was formed, in Montgomery, the Alabama Citizens' Council on Good Government consisting at the outset of representatives of eighteen state organizations.

Members of the research committee of this state council are preparing and distributing to the local councils a series of twelve studies on state and local government. One of the more recent, for example, gave detailed information regarding an injunction suit pending in the courts and having to do with appropriations legally allocated to education which had been suspended and the funds diverted to other functions. If decided favorably, this suit would result in more ample support to education.

The broad program of the Alabama state Citizens' Council is constructive reorganization of state and local governments in order that essential public services such as education and health may be preserved. This program embraces abolition of the fee system of payment, setting up the county executive plan, and modernization of the taxation system.

While the question of how to keep school doors open is not quite so critical in northern cities as in the south, a number of Citizens' Councils in the north are concentrating attention on educational problems. In Valley City, North Dakota, for example, a Citizens' Council made up of two representatives of each of sixty-six organizations has as its chief purpose the promotion of matters which concern the welfare of Valley City children. Prevention of child delinquency, safeguarding children against fire and accident, recreation, and training chil-

dren in citizenship were a few of the items considered at recent sessions of the council.

In Hartford, Connecticut, where the schools were recently consolidated and where as a result of this reorganization a number of new policies are to be determined in the near future, a Citizens' Council consisting of representatives of every important group and school district in the city has been formed to consider problems confronting the schools. The council insists that politics has no place in any part of the school system, asserts that the schools should be run economically, but as firmly states the conviction that "any saving at the expense of the adequate education of the children is an extravagance that the city cannot afford."

Wherever essential community services were threatened, Citizens' Councils have done their best to ward off serious curtailment in expenditure. In general the social and cultural services have been hit first and hardest.

Arousing interest in a community center was the first task undertaken by the Citizens' Council in Athens, Georgia. Fort Wayne, Indiana, found its Citizens' Committee useful in preventing a threatened disastrous cutting of its library services, which was accomplished through acquainting citizens with the value of these services and arousing public opinion. In Camden, New Jersey, the congress of civic associations is endeavoring to procure lower water rates from a private company which is serving some of the wards of the city.

A number of councils tackled tax delinquency as their first major task. Dayton, Ohio, was one of the first to organize "Pay Your Taxes" campaigns, a number of which are now in progress.

In New York State Citizens' Councils are particularly interested in the reorganization and simplification of government, doing away with overlapping units and useless offices. While some reorganization is possible under present statutes, no large improvement can take place without enabling legislation. The value of concerted action on the part of all Citizens' Councils is obvious and steps have already been taken to bring this about. Two state conferences held in New York City

have been attended by representatives of New York cities and towns. Senators Desmond and Mastick, chief proponents of bills in the state legislature for county reorganization, explained these in detail and simplification under existing legislation was discussed, the latter very graphically by citizens of towns that had already brought about such reorganization.

Formation of a Citizens' Council in New York City with its hundreds of organizations was a formidable task and yet nowhere was coordination of the work of the many civic groups more needed. Twenty organizations, for the most part federations of smaller groups, are now represented in the civic conference.

The job that most of the Citizens' Councils have tackled is that of governmental reorganization in the interests of efficiency. There has been a disposition on the part of a few educators to shrug shoulders at the Citizens' Council because it did not at once fight the battle for education: that is, insist that school costs not be cut. A broader and more realistic view of the situation may be necessary. If a government does not have the money and cannot borrow the money to maintain its expenditures at the existing level, something must be done. As we see it, the most constructive thing that can be done in that situation is to eliminate the waste in government and have economy and progress at the same time. Unfortunately, this cannot be done in a moment. It takes research and knowledge of the facts and organization and education, and citizens action. Citizens' Councils have in most instances made a start in this direction.

From the standpoint of the immediate purpose for which the program was organized—that is, the stemming of the tide of hysterical cut-and-slash economy—much has been achieved. The psychology of community after community has been altered from intense interest in budget cutting as such to sudden realization that the real problem is to keep the local governmental services operating satisfactorily. We have not yet reached the point where the social and educational services operating satisfactorily. We have not yet reached the point where the social and educational services are beginning to get

increased appropriations but the pendulum seems ready to start on its trip back. Thus city after city has been willing to see its tax rate increased this year in order to avoid default on the one hand or too serious curtailment of service on the other. In other words, we have already assisted in winning a kind of negative victory which is of great importance. Furthermore, in 150 cities, Citizens' Councils are continuing to combat waste with information and indifference with intelligent action.

If state and local governments had been organized and operated on an efficient basis in the past, which involves long range financial planning, what we commonly refer to as "the crisis in education" never would have occurred. Furthermore, the financial crisis in education can be met best by reorganization of local government, freeing money now wasted to be used for education. It is this approach to the problems of the emergency that the Citizens' Councils generally are taking. It is an interesting experiment in democracy and in the mobilization of public opinion behind the things that are worthwhile in our local community life. Much may depend upon it. Democracy in America must become efficient if it is to survive. This is true throughout the governmental levels—it applies as well to the artificial, inadequate and archaic unit known as the county, as to Federal and state government. Here, too, we have an educational crisis, involving the attitudes of American citizens toward their government, and the attitudes of public officials toward their work. And it is at this point, perhaps, that we in America face our most serious problem.

If Citizens' Councils make any fundamental contribution toward the solution of our problems of democracy—or education, for in the last analysis they are identical—it will be in the direction of improving these relationships.

HOWARD P. JONES,
National Municipal League.

The Educational Advisory Committee of the New York State Economic Council

PRESIDENT Merwin K. Hart, of the New York State Economic Council, announced the formation of the Council's Educational Advisory Committee on February 14, 1934. He accompanied this announcement with a brief statement of the considerations which moved the Council to request the services of such a committee, as follows:

"Several years' study and effort devoted to the promotion of efficiency and economy in the conduct of public affairs in this state have impressed the New York State Economic Council with the critical character of problems involved in the current maintenance of public education. On the one hand, the raising of funds for the support of schools, as for all public enterprises, grows constantly more difficult, and the demands of taxpayers for relief from burdens that seem intolerable are becoming ever more impatiently insistent. On the other hand, there is growing anxiety and redoubled effort on the part of those in charge of the schools to maintain and improve an educational program developed in the days of financial prosperity.

"Taxpayers demanding relief can hardly be expected to overlook the possibilities of economies in the public schools, which absorb a large proportion of the public revenues. Unfortunately, taxpayers, as a rule, have too little contact with the program of public education to appreciate the full significance and relative importance of the various parts of that program. As a result, their demands for tax relief, often expressed in terms of definite curtailments and eliminations in the educational program, are likely to be interpreted by educators as an attack on the school system. Attack means hostility; those attacking are felt to be enemies of public education. Assigned that role, it is extremely difficult for the overburdened taxpayer not to seem, at least, to justify it. But as every sincere person must recognize, no condition could be worse for public education and the public welfare than hostility between those in charge of the public schools and those who pay the bills for their support. The real and lasting interests of these two groups are inseparable. At no previous time has the need of their appreciative cooperation been so acute. Such cooperation, to be permanently effective, must be

securely based on mutual understanding of the educational-financial problems involved in the uninterrupted maintenance of a sound and economical system of public schools."

The type of service expected of this Committee and the conditions under which it would be available, were suggested by President Hart in the following statements:

"Opportunities for the service of this Educational Advisory Committee in the State of New York may be found wherever those in charge of schools, and those on whom the schools are dependent for financial support, are seeking efficiency and economy in education. Especially in circumstances in which the immediate concerns of administrators and financial supporters of education are in collision, or tending toward collision, this Advisory Committee should be of distinct service to education and to all interests involved.

"Initiative for the procurement of the services of the Educational Advisory Committee must be taken or approved by educational officials; the committee has no disposition to intrude its services on any one. The procedure of the committee, wherever it appears that it can be of service, will be especially adapted to each situation. In general, the methods of the typical school survey, in which members of the committee are widely experienced, will not be followed. Everywhere today the pressing need is for prompt and wise action on the part of responsible officials. The typical 'survey' accumulation and burial in bulky volumes, of innumerable data, beautifully charted and graphed, with a disconcerting array of recommendations, is not likely to meet this need. The committee proposes rather cooperative study of major educational-financial problems, taking account, of course, of all significant facts bearing on these problems. In such study the committee will expect the active participation of responsible local officials and representatives of educational and financial interests.

"Such cooperative study, including appraisal and constructive planning looking to prompt action, all with due consideration of the immediate and long-time interests of a sound and economical educational program, is a procedure of great promise. It promises not merely adequately considered, wise action in immediate situations; but also, and perhaps of even more importance, it promises wider and better understanding of the interrelated problems of public education and public finance, an understanding which is today largely and deplorably lacking.

"Within necessary limitations, the advisory service, as here outlined, is available to responsible officials without cost."

The personnel of the committee consists of Dean Henry W. Holmes, of the Harvard Graduate School of Education; Dr. William S. Learned, of the Carnegie Foundation for the Advancement of Teaching; Dr. Charles R. Mann, Director of the American Council on Education; Dr. Albert B. Meredith, head of the Department of School Administration of the School of Education, New York University; and Dr. Frank E. Spaulding, of the Graduate School of Yale University.

Although this Educational Advisory Committee was set up by the New York State Economic Council, the president of the latter body makes it clear in the quotations just cited that the Council requests and expects only disinterested and unbiased service of the committee—service designed to harmonize and promote the basically inseparable interests of public education and public finance. To give especial emphasis to the independent responsibility of the committee, President Hart stated in his announcement of the committee's formation that every member of it, "whether acting individually or as a member of the Educational Advisory Committee, preserves his disinterested independence of observation, thought, and judgment." And this idea he further emphasized in the "Weekly Legislative Letter" of the Council of March 24, by interpreting as follows the language just quoted: "This means among other things," he states, "that the Educational Advisory Committee will act just as independently of the Economic Council as it will of any educational or other organization."

A report, just issued by the committee, of its study of the situation in Little Falls, N. Y., is prefaced by statements of "certain educational-financial convictions." As these statements give a fair and reasonably adequate expression of the point of view of the committee and of the guiding principles in its procedure, they are here quoted in full, as follows:

"1. An efficient system of public education, free to all children and youth, is essential to the welfare of every community. Equally essential is the maintenance of the community's financial integrity. Without the latter, the former is impossible.

"2. The mere amount of a community's expenditures on education is a wholly unsatisfactory measure either of the efficiency of its schools or of the extent of its financial sacrifice. Maintenance, even improvement of educational efficiency, is often compatible with a reduction in expenditures, however low these may be in comparison with other cities. Further, it is obvious that the financial ability of one community may be taxed more severely by expenditures that are relatively low than is that of another by expenditures that are relatively high.

"3. Educational efficiency, and expenditures necessary to maintain and promote efficiency, are matters to be determined directly on the basis of facts. Larger educational expenditures in other communities, unwarranted expenditures in other departments of local government, are indeed matters of interest and concern, but they must not be allowed to determine, much less to justify, any given scale of expenditures in any public school system.

"4. Subject to general provisions of the education law, every local board of education and its superintendent are charged with the responsibility of administering the schools under their control in such a manner as to insure the largest possible benefits to pupils. The honest fulfilment of this responsibility often clashes with the personal interests of some who are not pupils. Whose interests shall be served? This is the crucial issue that arises with every administrative act. The fruits of settlement in favor of non-pupil interests are educational inefficiency and unjustified expenditures.

"5. A successful discharge of the responsibility for administering the schools in the interest of pupils is furthered or obstructed by the attitude and activity, or inactivity, of the community. The pupils themselves are largely incapable of standing for their own interests. Individuals and small but active groups are always seeking school funds, through jobs or sales, primarily for their own advantage. The interest of the overwhelming majority of citizens, however, for the sake of their children and general community welfare, is in the best schools that can be maintained with the most efficient expenditure of the money available for their support. The continuous expression of intelligent parent-citizen interest in the schools is indispensable to their efficient administration. School administrators are in constant need of the support, even of the stimulus, of an aggressive parent-citizen interest in efficient schools.

"6. If pupil interests are made the sole criterion of school administration, reasonable expenditures for schools need no justification as a preferred budget item in times of financial difficulty. Even in communities of wealth and in times of prosperity, expenditures of school tax-money in the furtherance of personal, non-pupil interests, though possibly worthy in themselves, are indefensible; in communities of restricted means and in times of economic distress, such expenditures are reprehensible and tend to defeat the main purpose for which the schools exist."

In early March, the service of the Advisory Committee was sought by the Board of Education and the Superintendent of Little Falls, and was welcomed by the Mayor and other city officials, by local representatives of the State Economic Council, and by many other interested organizations and citizens. All cooperated heartily with the Advisory Committee in its study of the situation, of which the outstanding features are typical of hundreds throughout the country:

Unemployment; closed factories; vacant tenements; unpaid rents; diminishing dividends; depreciation and loss of investments; declining trade; unpaid bills; an annually mounting percentage of uncollected taxes; foreclosures; loss of homes; strenuous efforts to reduce public expenditures; reductions in all city departments more than offset by increased expenditures for relief; repeated demands for salary and wage refunds, which teachers granted a year earlier and last year in larger percentage than any other city employees; growing tension between school officials and employees, on the one hand, and the city government and taxpayers on the other, the former feeling that they have been contributing more than their share, the latter charging them with unwillingness to cooperate in the relief of intolerable tax burdens and in the maintenance of the city's financial integrity.

Practically all criticism of the schools is focussed on their cost; their officials are charged with extravagance, are termed "spendthrifts"; yet the per-pupil cost, always very low, now appears to be lower than in any other city in the state; the general sentiment of the community is in favor of good schools; any movement to impair their present efficiency would un-

doubtedly meet with strong disapproval. The basic question is: How to preserve, even to enhance the schools' present efficiency, and at the same time to reduce their cost.

This question, the report of the Advisory Committee answers for Little Falls. The committee's study of the situation, and its recommendations, were made in strict harmony with the convictions and principles, already quoted.

A rigid analysis of every type of proposed expenditure during the year 1934 revealed that about 20 per cent was for debt service, which cannot be reduced or deferred without impairing the city's credit; in fact, the total of capital and interest payments due next year is substantially larger than ever. Of the remainder, 85.5 per cent was for salaries and wages. The rest covering all material items of current expense, chiefly books, supplies, and the operation and maintenance of the school plant, was found to be scarcely sufficient, in face of rising costs, and notwithstanding the exceptional thrift practiced by a very competent superintendent, who exercises as full control of the business as of the educational aspects of the system.

In a word, the only item susceptible of reduction without serious impairment of the school system was that for salaries. This item, the Advisory Committee found it practicable to reduce, not only without impairment, but with improvement in the efficiency of the schools. In fact, all of the committee's major recommendations rest entirely upon educational considerations; reduction in expense is incidental, a by-product.

The principal and most significant features of the committee's recommendations deal with the teachers' salary schedules and the content and administration of the curriculum of the junior-senior high school. This school's efficiency, the committee finds, "can be enhanced in two ways, first by improving the content of the curriculum so as to make it more suitable to the capacities and needs of pupils, especially to that large group who are in school chiefly because they have nowhere else to go." To make the school worth while for these youth, traditional studies must be revised and new ones introduced—studies dealing largely, on the level of pupils' capacities and

interests, with current practical problems of living—social, economic, industrial, and civic.

While the proposed improvements in the content of the curriculum will not in themselves tend to reduce costs—in fact certain comparatively small increases are indicated—the entire curriculum, as revised and improved, may be much more effectively administered through a substantial reduction in the pupil-load, that is, in the number of daily recitation periods in which pupils are now engaged. To quote from the committee's report,

"the present number of such periods, filling for most pupils the entire school day, is excessive—and unnecessarily expensive. This is not to say that pupils are overburdened with work; the reverse is undoubtedly nearer the truth. Those who are capable, are denied adequate opportunity and stimulus to work; while most of those who appear incapable, without excessive supervision, are probably engaged in activities that are unsuited to their needs.

"In the secondary grades pupils should be learning increasing independence and self-control; learning to study under self-direction; learning to assume responsibility for their own education; learning that there is lasting educational value only in what they do for themselves to achieve ends that they set for themselves as desirable. Such learnings should become a part of the student's life, characterizing his attitude and approach to every problem; they are of far more value than the passing of a test on a given assignment which will be signalized with a grade and a credit.

"The secondary school can render its pupils no greater service than to help them acquire these invaluable learning powers and habits. But instead of helping, a program that requires recitation or other work under immediate teacher direction throughout the day puts serious obstacles in the way. Independence and responsibility are learned through exercise. Time for such exercise should be afforded by the school program.

"Hence the Advisory Committee strongly recommends, not primarily for the sake of economy, but in the interests of the pupils, that a program be worked out which will reduce the normal pupil-load, in terms of daily recitation periods in regular subjects, from five to four with differentiations to fit individual needs. The length of periods for some subjects, at

least, might also be profitably reduced from 55 to 45 minutes. Since the number of teachers needed, other factors remaining unchanged, varies directly with the number of class recitations which teachers are required to carry, it is apparent that the reduction suggested in the average pupil-load would reduce by fully one-sixth the number of teachers required."

This recommendation of a sharp reduction in pupil-load, the committee is fully aware, is a direct challenge to the results of recent and current nation-wide movements, which have permeated the secondary schools of Little Falls, as they have in varying degrees all other secondary schools of the country, greatly increasing the pupil-load. These movements derive mainly from two sources, from standardizing agencies, and from that phase of recent educational development which expresses itself in a multitude of devices designed partly to attract, interest, occupy, and hold in school pupils who could not otherwise be held there, and partly to help pupils meet the requirements of the standardizing agencies. The first of these sources has been overwhelmingly prolific in its elaboration of such educational legal tender as "hours," "credits," "units," and "counts"; while the second has been no less prolific in its invention of such symbols of "progress" as "projects," "socialized study," "socialized recitation," "supervised study," "guidance," and "activities" and "clubs" innumerable. Meritorious as are the basic ideas of these movements, their development has resulted in a systematized maze of activities and requirements whose maintenance dominates the school days of both pupils and teachers. Meanwhile the basic educational need of pupils, and of teachers too, is obscured and neglected—the need of opportunity and stimulus for each pupil to work as a responsible individual, to think, to plan, to decide, and to do, each according to his capacity, and to suffer and to enjoy, each one, the natural consequences of his own thoughts and acts.

The committee is not insensible of the practical difficulties involved in effecting the changes suggested in this matter. "The greatest difficulty of all," it finds,

"will be to secure the necessary change of attitude on the part

of teachers and pupils. The pupils will make this change readily, and most of them gladly; the degree of readiness will depend on the teachers' success in adopting the new point of view. This change involves, for teachers, an increasing release to pupils of primary responsibility for learning; for pupils, an increasing assumption of this responsibility; for the administration, the making sure through frequent and suitable tests of an objective and external nature, that the pupil is capable of doing what is asked of him. Finally, there will be needed the support of the home, which, in some cases, may require the substitution of intelligent standards of school appraisal for long and uncritically accepted routine procedures.

"Through the changes here recommended, the teacher's function is in no wise lessened; its significance is rather increased. It is to strengthen the pupil by allowing, expecting, and requiring him to do for himself; by helping him so much, and only so much as is really necessary. To do more is to weaken rather than to strengthen him."

In place of the present purely automatic salary schedules, which provide initial and maximum salaries slightly higher than the minimal requirements of the state law, the committee recommends flexible schedules, at no point in conflict with the law, which permit substantial recognition of superior service. In support of this recommendation, the committee advances the following arguments and considerations. "The effect of relatively low, automatic schedules," reads the committee's report,

"is to retain the less efficient teachers while the more efficient are attracted away by better schedules, offering larger annual increments and higher maxima, with the result that an increasing number of positions, always tending toward 100 per cent, come to be held by those whose services are overpaid. This result is hastened in a system, like that of Little Falls, which is stationary or declining in enrollment, and is greatly favored by the operation of a tenure law such as that in force in New York State.

"Specifically, the combination of a rigid tenure law with a relatively low automatic schedule works like this. Under normal conditions of growth and competition for superior teaching service, the more competent teachers are constantly leaving, usually before the maximum is reached, because the automatic advancement is geared to average or mediocre ability.

When the number of teaching positions, for any reason, is to be reduced, all the best teachers on probation at low salaries must, according to law, be eliminated before the poorest teacher, almost invariably at the maximum salary, can be disturbed in his position. A comparatively low automatic schedule combined with a strict tenure law is a most effective selective device; it selects and retains the less fit."

All these comments, the committee goes on to say,

"are wholly impersonal so far as the Little Falls teaching staff is concerned. The Advisory Committee has no data, has made no effort to secure data, on which any appraisal of that staff would be justified. The comments are based on extensive experience, all of which supports the general conclusions here stated. They describe the inexorable workings of low automatic schedules, in so far as the factor of salary, which in most cases is the dominant factor, determines a teacher's choice of position. Of course there are rare, very rare individuals, who are little influenced by salary; there are also individuals of superior ability, somewhat less rare, whose place of service is determined by considerations other than the salary that they can command, such as the necessity or desire of 'living at home.' Subject to such individual and minor modifications, the operation of comparatively low automatic schedules is inevitably as described. There is no ground for assuming an exception in the case of Little Falls.

"Purely automatic schedules, together with their strong ally, a strict tenure law, can find no adequate defense in terms of pupils' interests, which should have the best teaching service that can be secured for the money available. The defense of such schedules, in last analysis, invariably centers in the interests of the staff. They are said to be 'fair' to teachers, whatever that may mean. They are also said to be 'easy to operate,' which is undeniable, for their administration requires mere clerical accuracy. But if the principle is sound, that public schools are supported at public expense for the benefit of pupils, how can a use of funds raised for that purpose, be justified on the grounds of easy administration and fairness to a group of people who are not pupils, while it obviously impairs the service to those who are? Teaching in public schools, as must be perfectly clear to a disinterested observer, is a form of public service. It is a public function supported by taxes, which are levied in the interest of civic solidarity and not for the benefit of a special class of citizens."

The flexible schedules recommended by the committee "fully recognize the minima established by law, and are automatic to the extent that the law requires. On account of a provision, however, which makes it possible to exceed at any point the minimal legal requirements by as much as 25 per cent, the recommended schedules make it practicable to compensate service that is distinctly superior or especially difficult to secure more adequately than do the present wholly automatic schedules; at the same time they do not necessitate paying for the least efficient as much as for the most efficient service" that the schools can command.

"Moreover," continues the report,

"under the schedules recommended the possibility of securing recognition for especially valuable service will exert a wholesome stimulus, quite in contrast with the influence of automatic schedules, which say to each and every one coming under them, no matter how superior your work, your increment and your salary shall be only so much, and also, no matter how poor your work, so long as you are not removed 'for cause after a hearing by the affirmative vote of a majority of the board' (Education Law, Sec. 872) your annual increments and salary shall be the same as received by the best."

In its administration of teachers' salaries, Little Falls is typical, not only of New York State cities, but of most of the cities throughout the country. Tenure and automatic salary schedules prevail generally. They have long been rooted in custom, and in recent years, thanks chiefly to the pressure of the great teachers' organizations, national, state, and local, they have come to be increasingly defined and supported by local regulations and state laws. Their influence on the profession as a whole is of the same kind as that exerted in all the Little Falls's of the country; they tend to select and retain the less competent, to repel and eliminate the more competent.

Since the committee's recommendation in this matter for Little Falls obviously suggests much wider applications, its position should be made clear. The committee stands for the most efficient teaching service that can be obtained and retained everywhere; in no community is that service good

enough; in the country as a whole, it is far below the needs of children and youth. At the expense of the service pupils now receive, the committee would not recommend the reduction of teaching costs by a single dollar. The committee does, however, maintain that many dollars can be saved in any school system dominated by tenure and automatic schedules, and the teaching service improved at the same time. What is needed, is a discriminating use of salary funds, paying for the higher grades of service much more than is now generally paid, and for ordinary and inferior service, much less or nothing at all. Such discrimination in expenditures for salaries, practiced on a nation-wide scale, would easily result in a 25 per cent improvement in teaching service without increasing total expenditures for this service by one dollar and would focus the critical emphasis in public education on its indispensable essential—good teaching.

Fortunately, no Little Falls need wait for this nation-wide movement. Every Little Falls still has sufficient control of salary expenditures to effect this degree of teacher-improvement within its own system. To accomplish this, it is only necessary that school officials, parents, and citizens resolve that the needs and benefits of pupils shall determine the use of monies which were raised by taxes for that purpose.

Finally, the Committee's Little Falls' report concludes with a statement on certain significant features of its recommendations, as follows:

"1. This report contains no recommendation involving impairment of educational efficiency.

"2. All major recommendations are made for the purpose of improving educational efficiency, are supported and should be adopted on that ground.

"3. Important improvements recommended in the Junior-Senior High School curriculum, and in the work and relationships of the students and faculty of that school, are compatible with a substantial net reduction in the annual cost of maintenance.

"4. The salary schedules recommended are in harmony with all the requirements of the state laws; they provide for more adequate compensation of superior service, without the neces-

sity of over-paying mediocre service; they will tend to encourage the best service of which each one is capable; and they can be operated at a considerable reduction in present costs.

"5. Finally, and by no means the least important result of these recommendations, is the avoidance in future—because unnecessary and inappropriate—of all appeals to teachers for a refund of a percentage of their contractual salaries. Such appeals, repeated year after year, impair morale both in the school and in the community, with resultant losses in educational efficiency undoubtedly greater than the amount of money involved. The avoidance of these losses alone would abundantly justify the adoption of the recommendations here presented."

FRANK E. SPAULDING,
Yale University.

Report of the Committee on Problems and Plans in Education

THE Committee on Problems and Plans has been relatively inactive this year. It has had but one meeting. The reason for its inactivity was that the grant on which it subsisted was practically exhausted at the beginning of the year. You may recall that the committee received from the Julius Rosenwald Fund for its operations \$35,000, to be spent over a period of three years, with the possibility of renewal in case the venture seemed to be worth further support. That fund has been used by the committee not only for its meetings but to finance, as far as it would go, certain of the exploratory studies that seemed essential to defining for further investigation some of the projects that were proposed. Of the \$35,000, for instance, \$10,000 went to two of these exploratory committees, and some of it is still in their hands.

The one meeting that was held was in the fall—on October 29th—and the committee ventures to believe that some extremely important results eventuated from that single meeting. On that occasion the committee recommended to the Chairman of the Council that he call a special meeting of the Council to consider the constitutional amendments that were brought to the Council's attention, as you remember, in February, that extended its scope to include the whole field of education, and also changed somewhat the method of election of the Committee on Problems and Plans, and at the same time it had before it the problem that was in the hands of the Commissioner of Education, namely, the formulation of some plan of emergency Federal aid for schools, and the committee recommended to the Commissioner and the groups associated with him certain features of a plan for Federal emergency aid that it thought should be observed, some seven principles, and they seem to the chairman of the committee of sufficient significance to read to you.

The first was that any measures taken to give Federal financial aid to the states in support of schools be emergency measures applicable only during the period of the emergency.

The second, that such emergency Federal aid be given to states for support of schools at the elementary and secondary levels only.

Third, that the amounts of Federal aid allocated to the several states be determined on an objective basis and defined in the law except for a relatively small contingent fund which may be expended at the discretion of the Federal official made responsible for it. That, you will recall, is substantially the principle that was presented in the report of the National Advisory Committee on Education, of which Dr. Mann was the chairman.

Fourth, that the objective basis for computing the amount given each state be a flat grant per child, the number of children to be determined by the last census figures, modified by the census figures of density of population and the minimum school year of eight months.

Fifth, that the Public Works Board be encouraged to secure the necessary legislation and to use Public Works money for building appropriate rural schools where needed.

Sixth, that appropriate action be taken to secure authorization for the Reconstruction Finance Corporation to enable them to make loans, first, to cover delinquent taxes; second, to refinance school bonds; and third, to make loans to institutions under private control.

Seventh, that these emergency grants in aid be given to the same territories and dependencies as now receive Federal grants under the Morrill, the Smith-Lever and the Smith-Hughes Acts.

Those opinions of the Committee on Problems and Plans were reported to the Commissioner of Education and were under consideration by the special committee which he had working with him on the problem of appropriate action in this emergency.

The committee also at its single meeting took steps to organize a study of the relation of the emotions to the educative process, and it had before it at that time the proposal that the directors of higher education in Europe be invited to hold their next conference in this country. It recommended to the

Executive Committee of the Council that funds be sought for that purpose, and if you will read the minutes of the Executive Committee that were placed in your hands yesterday you will see that the Executive Committee tried to get some money, but up to date has been unable to do so, for this particular purpose.

Two of the committees that were appointed by the Committee on Problems and Plans to have charge of exploratory studies have in the year made considerable progress. One of these, the Committee on Occupational Training and Adjustment, of which President Elliott of Purdue is the chairman, was appointed only during the last year, and it had hardly got under way when it lost two of its important members. President Morgan was drafted for the Tennessee Valley Authority, and Mr. Campbell, the head of the Civil Service Commission, went out of office. In spite of that fact, progress has been made by that committee in what it calls a pilot survey, which is an attempt to see what the particularly sore points are in the matter of occupational training and adjustment. The chairman expects it to go forward with the sum provided and at a somewhat more vigorous rate during the year.

Then there was a Committee on State Relations to Education, of which Professor Meredith, of New York University, is the chairman. I think the Council undoubtedly remembers the peculiar constitution of that committee. Three persons are on it representing education and three representing political science, who were chosen at our request by the Social Science Research Council, and the points of view of the students of education and the students of government are apparently for the first time brought together in the consideration of this committee. I am told by the chairman that the members who represent the Political Science Section of the Social Science Research Council have been amazed and enthusiastic at the problem as it opens up before them, recognizing, as they have, that the specialists in political science have for the most part left this great area of governmental activities, namely, educational finance and control, pretty largely out of account in their ordinary considerations. At any rate, this committee, which has been in operation now for somewhat

better than two years, has mapped out a very large study of the Federal relations to the states, the relations inside the states of the various elemental units to one another, and the relations of governmental and educational activities in the smaller units. The Council has already submitted this project as outlined and has urged that it be appropriately supported. Up to date there has been no success, but I think the members of the Committee on Problems and Plans are not at all prepared to admit defeat. They believe that the project is really one of the most important things that is now before us on the administrative side and that its importance becomes daily more patent.

With the small sum that the committee has had for the exploratory work, it has turned out three partial studies of certain aspects of the field. These are ready for publication and probably will soon be published. One of these is the study of the legal or structural relations of the civil state to the educational institutions within the state. That is a document of some 250 pages and is illustrated with charts and graphs for all of the forty-eight states. The second one is a study of the function of the state in relation to higher education, which apparently covers new ground. The third is a study of the judicial determinations affecting the power to create and alter school districts in the United States. These three, as I say, are practically ready for publication now.

Yesterday reference was made to the action of the Julius Rosenwald Fund within the last few days appropriating \$10,000 a year for two years to continue the support of the Committee on Problems and Plans. As the Council's constitution has been amended and as it has of late been interpreted, the Committee on Problems and Plans seems to hold a somewhat strategic position in the operations of the Council, that in some fashion the work of this committee would have to be cared for. If it were not for this special support which the committee has had, it would undoubtedly have to come back on the Council's general funds for what support could be spared. For the moment that is now not necessary, due to this action of the Julius Rosenwald Fund.

SAMUEL P. CAPEN, *Chairman.*

Report of the Committee on Standards

IT IS an interesting circumstance that the American Council on Education should form a new Committee on Standards at the very time the North Central Association of Colleges and Secondary Schools is issuing a new statement of policy regarding accrediting which deliberately excludes the word *standards* from its official vocabulary.

Composed as it is of representatives of a dozen national and regional associations covering professional as well as college and secondary school interests, the Committee on Standards doubtless thereby tends to conservatism; tends to seek that worthy conservative objective: "the happy mean between too much stiffness in refusing and too much easiness in admitting variations in things once advisedly established."

That statement, by the way, appeared in the preface to the first Book of Common Prayer adopted in America in the days of George Washington. It is quaintly felicitous: "The happy mean between too much stiffness in refusing and too much easiness in admitting variations in things once advisedly established."

Actually there is no real issue involved in the avoidance of the word *standards* by the North Central Association and its fresh adoption by the American Council. For all its banning of *standards* in its terminology, the North Central's "bases of accrediting" and "total pattern maps" have teeth in them; and your Committee on Standards, despite its conservative name and allegiances, has liberal leanings and a desire for broad rather than narrow criteria.

Upon this aspect of the make-up of the committee, the chairman, at the initial meeting in Washington on April 7, ventured to say:

"Most of us here today are veterans at this game. We have inspected and inspected and inspected. Running true to conventional pedagogical form, we ought to be hardboiled Grad-grands with an obsession for facts. It happens, however, that the personnel of this committee, whatever its other char-

acteristics, has this in common, that we are predominately liberals.

"We know the advantages of formal and definite standards in a pioneer era, in the range from secondary schools to professional schools. The 'Carnegie unit' served a useful purpose in the period when a foot-rule of this sort impressed boards of education and helped to raise the minimum educational level in many parts of the country. In the professional field the criteria which developed from Dr. Flexner's study of medical education in 1909-10 had the outcome of reducing the number of medical schools from 166 to about 70; and hardly anyone who knows about the old proprietary medical school would question that there has been a tremendous benefit to the medical profession and to society by the rigorous application in this field of fixed standards.

"A good deal of water has flown under the bridge, and today we find that the Carnegie Foundation for the Advancement of Teaching, following its Pennsylvania Study, is in the lead with proposals to drop the old Carnegie Unit; and the American Medical Association, through its Council on Medical Education and Hospitals, is preparing for a re-study of the objectives of medical education and a survey and reappraisal of all medical schools in this country.

"Two factors account for these and other activities and for our own liberalism in viewing standards.

"The first is the improvement in scientific measurement as applied to education. We know now that the time-clock of the Carnegie unit does not record intellectual accomplishment. Educational psychology has given us better instruments in standardized subject-matter tests, in the new-type tests, in scholastic aptitude tests, in professional aptitude tests as applied to medicine and law.

"The chief element in our own thinking, I venture to say, is our scientific spirit. We have more of what John Stuart Mill called a healthy skepticism. We show this by our criticism, in the scientific spirit, of the methods and results of these new scientific devices.

"The second factor accounting for our liberalism is, I believe, the fact that American higher education is advancing out of the pioneer stage into that of the university ideal. We are interested in buildings, equipment, finances; but we realize that any educational institution must be judged by what William James called its *tone*. A vague word; not scientific, yet every one of us here, when we have gone to and fro on our

inspections, appreciate that the truly important thing about any school, college, university is precisely the quality of its student body and of its faculty which James so aptly termed its *tone*."

The chairman expressed his belief that the new Committee on Standards, working in the spirit indicated, has possibilities of usefulness in American education by "synthesizing the findings of various studies, the judgments of experienced workers in the varied fields of classification and accrediting; and by crystallizing findings and judgments into fundamental principles stated with simplicity and directness." The chairman quoted the statement of the purpose of the Committee as given by Dr. John Henry MacCracken: "to deal with the principles of classification and accrediting rather than with the application of these principles."

An excellent presentation of the new attitude toward accrediting advocated by the North Central Association was given by the U. S. Commissioner of Education, Dr. George F. Zook. When he was President of the University of Akron, Dr. Zook was a prime mover in the study which resulted in the North Central's present policy.

The probability "that the standards of the future will be general in character" was set forth by Dr. Zook in addressing the committee. General optimum standards will be substituted for minimum specific standards. Under this conception an institution will be at liberty to choose its own methods. In some instances the institutional machinery may be elaborate and formal; in other instances it may be possible for an institution to perform the function effectively through machinery which is less imposing and much more informal.

Dr. Zook stressed that, given this liberty as to ways and means, an institution will be expected to accept appropriate responsibility and to demonstrate that its methods, plan and organization are effective in attaining the general principles called for in the standard as they apply to the objectives which the institution has set for its goal.

As to the new program of the North Central Association, Dr. Zook said that it has two equally important functions:

accrediting and stimulating. There will doubtless long continue to be a very real necessity for what we now call the accrediting of institutions. That the accrediting procedure of the old type had served its day and had been valuable Dr. Zook freely granted, but he insisted that "we must establish accrediting procedures that are more scientific and much more carefully carried out." He expressed his thought that schedules of information, no matter how much improved, can not replace the need for personal inspection. He favored visits to each institution seeking accrediting by a committee of two or three members staying at least two days.

As to stimulation, Dr. Zook thought that at least an equal amount of energy should be expended in aiding institutions already included in the accredited list as in considering institutions applying for inclusion. The new standards will be ideals toward the attainment of which the institution seeking accrediting and the one which has long enjoyed that status may work with equal zeal.

Dr. Zook stated, in closing, the conclusion reached by those who put through the North Central study that "the association should have but one list of accredited higher institutions."

The following questions are now before the Committee on Standards for study and discussion:

And these questions developed from many sources. Dr. Mann contributed some, Dr. MacCracken others, but they came from Verdun to Beersheba—from Portland, Maine, to Portland, Oregon.

1. What is the relationship of regional and state lists of accredited institutions to functional lists?

2. Shall the American Council adhere to regional lists for colleges of arts and science?

3. Should an institution which has a law school not accredited be included on the accredited list?

4. What should our attitude be toward the junior colleges which are increasing in such numbers?

5. Should junior colleges be included with the regular list of colleges of arts and science or be included with the list of secondary schools, or be listed separately?

6. Should the Council utilize functional lists so far as professional schools are concerned?

7. Should teachers colleges and engineering colleges be treated as professional schools or as colleges of arts and science?

8. Should the Council list American institutions in foreign lands such as those of Constantinople, at Cairo, and in China?

9. What part may the Federal Government appropriately play in the determination of educational standards?

10. What, if anything, should be done regarding the classification of institutions which fall outside the regular fields, such as theological seminaries, Emerson College of Oratory in Boston, Springfield International College, etc.?

11. Has the faculty of the institution a share of responsibility for educational policy and a relation to the governing board?—this implying, on the one hand, due provision for freedom of teaching and investigation and security of tenure; and, on the other hand, protection of the interests of the institution as to needful elimination and resignation at short notice.

At the April 7 meeting of the committee a good start was made in the consideration of a half-dozen of the foregoing questions. Sub-committees have been appointed for further study and later report.

The following (all of whom attended the April 7 sessions in the offices of the American Council on Education) comprise the Committee on Standards:

Katherine Rogers Adams of Kingswood School, Cranbrook, Bloomfield Hills, Michigan, representing the American Association of University Women.

Alexander B. Andrews of Raleigh, N. C., representing the Section on Legal Education, American Bar Association.

Doak S. Campbell of George Peabody College for Teachers, representing the American Association of Junior Colleges.

William D. Cutter of Chicago, representing the Council on Medical Education, American Medical Association.

R. N. Dempster, (*Secretary*) of Johns Hopkins University, representing the Middle States Association of Colleges and Secondary Schools.

Frederick J. Kelly of Washington, D. C., representing the U. S. Office of Education.

O. R. Latham of Iowa State Teachers College, representing the American Association of Teachers Colleges.

Shelton Phelps of George Peabody College for Teachers, representing the Southern Association of Colleges and Secondary Schools.

James A. Reeves of Seton Hill College, representing the National Catholic Educational Association.

H. W. Tyler of Washington, D. C., representing the American Association of University Professors.

Raymond Walters, (*Chairman*) of the University of Cincinnati, representing the Association of American Colleges.

W. E. Wickenden of the Case School of Applied Science, representing the Society for the Promotion of Engineering Education.

George A. Works of the University of Chicago, representing the North Central Association of Colleges and Secondary Schools.

George F. Zook of Washington, D. C., U. S. Commissioner of Education.

John H. MacCracken, of Washington, D. C., representing *ex officio* the American Council on Education.

For the work of the Committee during the coming year, the Chairman has appointed the following sub-committees to consider specific problems:

Committee on Philosophy of Standards: Miss Adams, Messrs. Cutter, MacCracken, Reeves, Tyler, Walters, and Zook.

Committee on Regional and State Lists and Functional Lists: Messrs. Andrews, Dempster, Kelly, Phelps, and Works.

Committee on Professional Fields: Messrs. Andrews, Cutter, Latham, Walters, and Wickenden.

Committee on Nomenclature: Messrs. Campbell, MacCracken, Walters and President David A. Robertson of Goucher College.

Respectfully submitted,

RAYMOND WALTERS, *Chairman*,
University of Cincinnati.

Report of the Committee on Education and Government

IN NOVEMBER, 1933, George F. Zook, United States Commissioner of Education, called a conference to consider the effect of the depression on education. This conference agreed that a number of phases of education were in a serious condition. They recommended the formation of a Federal Advisory Committee on Emergency Aid for Education, with James N. Rule, State Superintendent of Schools of Pennsylvania, as Chairman.

This committee was representative of a number of educational and lay organizations. The American Council on Education was represented by its Chairman, Dean William F. Russell, the Director, Dr. Charles R. Mann, and one member of the Executive Committee of the Council.

After several meetings, the committee agreed upon a six-point program for meeting the emergency in education. A special and independent legislative committee was appointed by the Chairman of the Federal Advisory Committee for Emergency Aid for Education, to draft legislation embodying the proposed program and to present it to the administration leaders and Congress.

It was the desire of the Chairman of the American Council on Education that it should participate in developing the six-point program. Accordingly, the Chairman, Dean William F. Russell, addressed a memorandum to the Carnegie Corporation in which he pointed out the present plight of education, the causes back of the situation, and the existence of the Six-Point Emergency Program. He requested a grant of \$5,000 in order that the Council might be in a position to study the needs of education growing out of the crisis, and to participate in the development of the Six-Point Emergency Program. This request was granted.

At the special meeting of the American Council on Educa-

tion on February 10th, Chairman Russell was authorized to appoint a committee responsible for carrying out the purposes stated in the application for the grant. He appointed the following committee: Lotus D. Coffman, Sidney B. Hall, George Johnson, Daniel Marsh, Parke R. Kolbe, Paul R. Mort, Cloyd H. Marvin, A. B. Meredith, David Weglein, C. R. Mann, and John K. Norton, Chairman.

One investigation has been completed under the direction of this committee. This study revealed the effect of the depression on the financial support of education. The findings are graphically presented in Chart I. A number of interesting facts are revealed by this chart, such as the following: First, the wide differences in the level of educational support maintained in individual states and between different states. Second, the more serious retrenchments which have taken place in the states which were making the least adequate provision for educational support at the outset of the depression. This investigation revealed the need for Federal emergency aid for education in certain states.

It is the plan of the committee to conduct other studies of this type as conditions demand, and in so far as its resources permit.

The committee at its meeting last Thursday authorized the collection of information as to the crucial issues involved in the simplification of governmental structure in the United States, with particular reference to the relation of education to general government. This study will involve:

1. A review of authoritative literature as to the viewpoints of students of educational administration and of general governmental administration as to the proper relation of education to other areas of government.
2. Definition of agreements and disagreements and the clarification of issues and problems for research.
3. The conduct of investigations designed to shed light upon certain of these issues.

It is hoped that information resulting from the foregoing program may become the basis for cooperative effort between educators and students of political science, designed to accom-

plish needed revisions of governmental structure, and looking towards greater efficiency in education as well as other areas of public service.

In the development of its work, the Committee on Education and Government is carefully coordinating its program with that of the committee of which Professor A. B. Meredith is chairman and with other projects in this general field, which are now being sponsored by other organizations.

JOHN K. NORTON, *Chairman,*
Columbia University.

Report of the Committee on Fundamental Factors in Achievement

DURING the past ten years numerous efforts have been made to develop methods of appraising achievement in school work so that achievement might be substituted for credits as the basis for academic promotion. These efforts have taken many different forms, the variety of which indicates that there are many varied opinions as to what constitutes achievement in school work.

As a preliminary step in formulating a plan of action for isolating the fundamental factors in achievement, this committee has studied a number of the current efforts in this field. By way of a report of progress it presents to the Council brief summaries of a few of these varied methods of attacking the problem in order that the members of the Council may more fully realize the difficulty and intricacies involved and may cooperate with the committee in bringing further materials on this subject to its attention and in submitting to it constructive suggestions.

This problem of fundamental factors in achievement has lurked in the background of the Committee on Personnel Methods of this Council ever since its organization in 1925. The cumulative record folder which it issued in 1928 contains spaces for recording what were considered by the committee to be significant items of achievement which might throw some light on the personal characteristics of the individual concerned. These items were selected from a long list of several thousand items used by various groups for this purpose. The original record card, designed for college use, has been supplemented by other similar cards designed for elementary and secondary school use, so that now the schools can keep a consistent cumulative record of the achievements of a particular individual throughout his entire academic career.

In like manner it has been the constant effort of the Com-

mittee on Personnel Methods and its Cooperative Test Service to produce tests that would measure achievement that was worth measuring and recording. Since it is obviously unfair to give students tests on subject matter or methods to which they have not been exposed in class, the Test Service has been limited in the materials it can use in testing to the materials currently used in school work. This has tended to make the tests rather a measure of existing school practices than a measure of worthwhile achievement. The experience has resulted in greater perfection of the techniques of testing, but the realization of the result of substituting achievement for credits as a basis of academic promotion awaits further agreement on what constitutes achievement in the several academic subjects.

The Modern Foreign Language Study has in like manner spent an enormous amount of time and energy discussing what constitutes real achievement at different levels of foreign language instruction. As its discussion progressed it has produced corresponding tests of reading, of vocabulary, of grammar, and has, on the basis of the results of these tests, steadily progressed toward a clearer understanding and a better definition of the fundamental factors in achievement in foreign language study.

As a result of its experience, the Committee on Modern Language Teaching reached the conclusion that the list of objectives which the foreign language teacher sets himself to achieve must be considered as a working basis for experimentation rather than a final formulation. Concerning the efforts to define what foreign language study contributes to cultural development, this group contends that the elaborate analysis from a sociological point of view made by such writers as Bobbitt and Snedden are interesting, ingenious, and very useful in making our thinking on educational matters more realistic but their procedure is, so far, *a priori* and logical rather than experimental. Except in the case of the three R's we can trace the influence of almost no academic subjects on the lives of numerous individuals.

The recent experiences of the Cooperative Test Service and of the Foreign Language Committee indicate that this matter

of determining the fundamental factors in achievement and of developing instruments for their measurement is more than an academic question. The recent report by Cheydleur of the University of Wisconsin (EDUCATIONAL RECORD, April, 1934) shows what large financial wastes result from operating foreign language instruction on the basis of credits rather than on the basis of achievement. This report also suggests that enormous financial savings may be made in the costs of schooling at all levels as soon as we have available tests that measure even roughly the achievement of students in other subject matters. The further development of such methods of appraising achievement await the determination of what types of achievement are significant in each of the areas of instruction.

Another important contribution in this field is the recently published report of the American Association of University Professors on the subject of college teaching. This report contends that the greatest obstacle to the improvement of college and university instruction at the present time is the absence of appropriate criteria whereby the good teacher can be singled out and recognized. Therefore, the Association proposed further cooperative study and experiment on this theme. The committee suggests that the starting point of such studies is the proposition that good teaching ought to produce results in students and that these results provide a basis for measuring the quality of instruction given. Therefore the next step is cooperative effort to define what are the desired results of teaching as a basis for the establishment of criteria of good teaching.

Another important line of investigation which throws more light on this subject is the work of the Committee on the Orientation of Secondary Education of the Department of Secondary School Principals of the N. E. A. Speaking of the work of this committee at its recent meeting in Cleveland in February, 1934, the Chairman of the committee pointed out the difficulties of proposing satisfactory standards of achievement for secondary schools more definitely than we have done until we agree on what we want secondary schools to produce. If, as has been the customary practice in defining objectives,

we say that youth must be trained for "the great end and real business of living," we have first to learn what that ideal requires before we can either plan or evaluate. If we say "leadership" is the desired result, we must as a basis of action specify the qualities and activities necessary to insure it. Without them we can neither plan wisely nor evaluate sensibly. No new programs of the schools can be constructed until we have agreed what ends we wish to reach.

The foregoing sample cases indicate some of the perplexities which particular groups are having in determining the fundamental factors in achievement in particular fields of teaching. These particular perplexities in particular subjects are rendered more perplexing because of the lack of any substantial agreement on the sort of results which all schooling seeks to achieve. The following two cases are mentioned as indicating a radical difference in point of view of different groups on this more general issue.

A recent bulletin issued by the State Department of Education in one of our states for the information and guidance of all concerned with public schools states that "the fundamental aim of education is growth toward the ideals of society." It then defined growth as "an increasing capacity on the part of an individual to adapt himself to his environment." The ideals of society, the bulletin states, may be defined as "attitudes to be possessed by the individual members of that society." These attitudes thus defined may then be considered the fundamental objectives of the school. The development of such attitudes is thus the only real objective which the school should seek to achieve. Hence the achievement of that end is the immediate and specific objective of teaching in every class room.

As an aid to practical experimentation in improving school instruction the bulletin presents a tentative list of twenty-two "desirable attitudes" which may be regarded as the objectives of public education in that State. A typical sample of these attitudes is called "dependability." This is defined as "the quality of being worthy of being depended upon: trustworthiness; reliability." The other twenty-one attitudes are defined in similar manner. Each of these definitions is accompanied

by "suggested dispositions, tendencies or inclinations" such as, in the case of dependability, "the urge to do all work efficiently and honestly;" by "suggested understandings or generalizations" such as, in this case, "in a perfect social democracy evaluations are based only on intrinsic worth;" and by suggested "specific abilities" such as "the ability to know the elements of dependability."

A radically different point of view is presented in a treatise on education published some years ago by one of our best known educational leaders. The philosophy of this point of view is expressed in the following quotations from this book: "Man changes the work in which he is." . . . "The value of any change in things or man is its value to somebody, its satisfaction of somebody's want. Things are not good and bad for no reason. Better and worse, worthy and harmful, right and wrong, have meaning only in reference to conscious beings whose lives can be made more satisfying or more bearable." . . . "The aims of education should then be: to make men want the right things, and to make them better able so to control all the forces of nature and themselves that they can satisfy these wants." The improvement of education according to this point of view obviously requires that we observe the results of each study, appraise their value in making man's wants better and in making him better able to satisfy them, determine what other observable results might be of greater value in achieving these ends, experiment to achieve these other results, and continue the process until the results satisfy our aspirations.

At first sight it may seem that the tests and experiments made in carrying out this process would differ fundamentally from those called for by the procedure advocated in the state bulletin just mentioned. Yet it is equally clear that both are sincerely proposed as methods of making schools help us more fully to realize the universal desire for more satisfying lives. There must be some fundamental factors of achievement that are common to both.

Under these conditions it seems to your committee that the time is ripe for a careful comparison of the results of such

widely differing experiments conducted under such radically different working hypotheses in an effort to discover what sort of immediate and ultimate goals of instruction best help teachers in various subject matters to achieve universally desired results.

Therefore, your committee recommends that it be continued, that it be given \$5,000 to carry on its exploratory work in this field during the coming year, and that its name be changed to the Committee on Desired Results.

Respectfully submitted,

CLOYD H. MARVIN, *Chairman,*
George Washington University.

Report on the Cooperative Test Service

FOR a decade or more an urgent need has been felt by administrators, guidance officers, research directors, and others in many schools and colleges for a continuing supply of tests in the fundamental subject matters that would yield comparable results year after year. This need was accentuated by the growing realization of the importance of a long-term continuing study of growing individuals as a basis for educational and vocational and personal guidance, including admission to and placement in college. While all concerned realized and emphasized the need for other types of information about pupils, it was equally clear that no educational guidance program would be adequate which did not include a systematic effort to measure objectively at least some of the phases of achievement in the subject matter fields included in the curriculum. It was also apparent that the measurement of the extent and rate of growth was more significant from the viewpoint of guidance than the measurement of status at any one time. Hence the urgency of the demand for a series of tests that would yield measures year after year that would be as closely comparable as possible. It was this demand that led the Central Committee on Personnel Procedures of the American Council on Education to plan the Cooperative Test Service and to seek for it the financial support which was obtained in 1929 from the General Education Board.

Near the end of the last decade a number of exceedingly promising educational experiments, projects, and practices were threatened by the absence of a continuing supply of comparable tests. Among these projects were the Pennsylvania Study of the Carnegie Foundation, which began the first large-scale study of growing individuals according to the plan of the cumulative record form devised and published by the American Council in 1928; the Educational Records Bureau, which was organized in 1927 and became the operating center of a growing number of progressive independent secondary schools

which were aware of the need for more adequate guidance and which were attracted by the potentialities of the American Council cumulative record and its underlying philosophy and methodology; and a large number of secondary schools and colleges that had inaugurated continuing guidance programs involving the periodical use of achievement tests and placement tests. By the end of 1929 some of the institutions had used the same tests with the same students one or more times, and were confronted with the dilemma of abandoning their follow-up studies of achievement, or of going to the trouble and expense of establishing comparability between the test series used up to that time and one or more of the other series of tests available at that time. The beginning of production of the Cooperative tests in 1930 enabled these institutions to carry on, and has stimulated many other institutions to inaugurate similar studies of the achievement and growth of individual pupils.

The original commitment of the Cooperative Test Service was to construct ten or more comparable forms of achievement tests in each of the fundamental subjects of secondary school and junior college levels. The fulfillment of this contract has very properly been the primary concern of those responsible for the conduct of the project. We recognized at the outset the desirability of further research for the improvement of examination techniques, forms of questions, etc.; but we also recognized the importance and value of meeting the current demand for comparable tests by schools that were and are willing and anxious to carry on guidance work. The training and re-orientation of teachers by actual experience in guidance was and is fully as important as the technical improvement of tests. It seemed to the Committee that it would be unwise to delay the use of comparable tests in guidance until perfect tests could be made, because it is not likely that completely satisfactory tests will ever become available. For this and other reasons the Committee thought it wise to restrict this project to the construction of tests as good as the present state of expert knowledge will permit.

In accordance with this policy the Cooperative Test Service

has pressed forward its construction program vigorously during the past year, as in preceding years. At the meeting of the Committee on May 14, the Director's report showed that production is one or two years ahead of schedule in most of the subjects, and three or more years ahead in several subject fields.

The Committee is gratified by this progress in production, and even more by the influence which the Cooperative Test Service, in collaboration with other committees of the American Council, is apparently exerting on the thinking and practice in educational institutions. During the current fiscal year over 360,000 tests have been distributed to schools and colleges all over the country; but the Committee is convinced that this figure represents only a minor part of the story. The experience of the last two decades has shown that the way in which tests are used is vastly more significant than the number used. The Cooperative Test Service and the other related committees of the American Council have therefore from the beginning given greater emphasis to the philosophy and methodology of guidance, and to the rôle of comparable tests in guidance, than to the mere giving of tests. It is the inchoate and unsystematic way in which tests have been used during the last two decades that has obscured the real potentialities of comparable tests for constructive educational and guidance purposes.

The Central Committee feels greatly indebted to our Subcommittee on Educational Testing for the way in which it has, under the leadership of Dean Johnston, and by the energy of its Secretary, Dr. Beers, carried this emphasis to increasing numbers of schools and colleges all over the country. In addition to carrying on the College Sophomore testing and guidance program, Dean Johnston's committee, acting for and with the distinguished Committee on Tests of the American Association of Physics Teachers, inaugurated in January of this year an experimental testing program in physics in which more than 300 colleges participated. The Committee hopes to cooperate in similar experimental programs in other branches of the college curriculum next year.

In addition to its work in organizing these testing and guidance programs, the Committee on Educational Testing has collaborated extensively with institutions and associations in various parts of the country that have been planning coordinated guidance programs. Last summer a representative of that committee addressed the Colorado-Wyoming Registrars' Association, and consulted with the State Joint Commission of Colleges and Secondary Schools in Santa Fe, New Mexico; in November, 1933, two representatives of the committee gave a series of addresses at the Texas State Teachers Association meeting in Austin, and spent considerable time in consultation with the Texas Joint Commission; in January of this year the committee was represented at the meeting of the Georgia College Association. Partly as a result of these addresses and conferences by members and representatives of Dean Johnston's committee, joint commissions representing both secondary schools and colleges have been appointed in Colorado, Wyoming, New Mexico, Texas, and Georgia for the purpose of studying state needs and formulating state-wide coordinated guidance programs based in part on cumulative records of comparable measures, personal observations, and data on conduct, interests, attitudes, etc. These commissions have been greatly aided in their deliberations by Dean McConn's article "Educational Guidance Is Now Possible" published in the October, 1933 EDUCATIONAL RECORD. One of the joint commissions named above distributed over seven hundred copies of this article, which has had to be reprinted several times to meet the demand for it. In April of this year the American Association of Collegiate Registrars passed a resolution offering to secondary schools fuller cooperation in their educational guidance work, including college admission, and calling attention to the minimum program outlined in Dean McConn's article.

The Central Committee has been keenly aware from the beginning that no one series of tests would be adequate for the schools and colleges in every section of the country, or for all institutions in any one section. We therefore announced very early that the Cooperative Tests were intended only for those

regions and localities for which the tests were deemed to be appropriate, and in which test-making facilities were not available. The Cooperative Test Service has enjoyed the most cordial relations with the state-wide testing projects in Wisconsin, Iowa, Colorado, Indiana, Ohio, Kentucky, and other states. Indeed, the leaders of the projects in several of these states are the authors of several of the most widely used of the Cooperative tests.

Several years ago the Director of the Cooperative Test Service called the attention of the Central Committee to the importance of establishing comparability between the Cooperative tests and the tests used annually in the several state-wide programs mentioned above. Such comparability is important not only as an immediate convenience to admissions and guidance officers who have to interpret the records of students from various parts of the country, but also to increase the freedom of choice of tests of schools and colleges that wish to secure comparable measures on their students year after year. More recently the United States Office of Education has become interested in this important problem. A conference of several leaders in testing programs was called by Dr. Zook in Cleveland in February of this year, at which the consensus of opinion was favorable to further investigation of the problem. It is our confident hope that in the not distant future the necessary funds and cooperation may be secured for the preparation each year of tables of equivalent scores that will facilitate a correct interpretation of test scores from various parts of the country.

As was anticipated at the outset, the fears concerning the constricting influence of the Cooperative and other similar tests on the curriculum have not been justified by experience, and have largely disappeared in most informed circles, and particularly in those schools that have had actual experience in using the Cooperative and other similar tests. There are two main reasons for the diminution of these fears, both being associated with actual experience with the tests.

First, the tests in most of the subject matter fields are based largely upon certain fundamental common aspects of the sub-

ject matters which are widely recognized as important elements of achievement in those fields, and therefore worthy of being measured. It is recognized, of course, that the tests do not measure all the desired outcomes, and in some subjects, do not measure the most important objectives; but this fact is now recognized as an argument for the development and use of additional tests, not as an argument against the use of the existing tests. We cannot make progress in measuring the more imponderable aspects of achievement by refusing to measure those aspects which now yield to objective methods. We must still depend on subjective judgment and observation for the estimation of achievement in important areas of learning in all subject matter fields, but these estimates will be aided rather than hindered by comparable indices of achievement in those aspects that can now be measured objectively. All recognize the higher creative values of learning in English, foreign languages, and mathematics, and all recognize that the existing tests do not measure these values directly; but most schoolmen recognize that the aspects of achievement measured by the tests are positively correlated with the higher values, and an increasing number believe that their estimates of and control over the higher values are enhanced by the availability of comparable measures of the more objective aspects of achievement. There are very few if any teachers now who fear that the availability of comparable measures of English usage and vocabulary, or of reading, vocabulary, and functional grammar in a foreign language, will militate against the higher objectives in English or foreign language study. On the contrary, an increasing number of teachers believe that such measures, wisely and constructively used, will facilitate humane educational guidance and help direct the efforts of both teachers and pupils toward goals that are appropriate to the individuals concerned.

In the second place, fear regarding the influence of comparable tests on the curriculum and teaching has been allayed by a new appreciation and understanding of the rôle of measurement in education and of the proper uses of tests and other sources of information regarding the achievement and growth of individual pupils. The development of this new apprecia-

tion has been hindered by the fact that examinations have been used for so long as sheer instruments of coercion to enforce either state or local curricular prescriptions and their correlative standards. The widespread rebellion against such misuse of tests and examinations has been and is entirely justified, and has already produced fruitful results. This rebellion has now been happily extended to curriculum committees, whose dispensations have been the fountain-head of that academic tyranny which has been too exclusively laid at the door of tests and examinations. Like most rebellions, this uprising against prescriptive uniformity has been carried to pessimistic extremes in some quarters. Not only is the misuse of tests denounced in such quarters, but all use is prohibited, on the assumption that constructive use is impossible because teachers can never learn to use tests properly and will always continue to misuse them.

Happily, this pessimistic, extreme, and to teachers and teacher-training institutions unflattering, view has rapidly given way to a more hopeful and saner outlook. For this change we are mainly indebted to the American Council on Education and to the organizations that have collaborated with the American Council in the use and development of its cumulative record form, and in the spreading of the constructive philosophy and methodology that underlies that pioneer contribution to long-term educational guidance.

Thanks to the educational work of the American Council and its committees during the last decade, a new conception regarding the proper uses of tests has spread over the country—a constructive conception best described by Dr. Mann in his introductory remarks as chairman of the luncheon conference at the St. Regis, November 3, 1933, and later amplified by Dean McConn, at the same conference. According to this new conception the main purpose of tests is not to enforce any pre-determined curriculum or standard, but rather to serve as one source of information that will aid the school in constructively guiding the educational efforts of individual pupils. For such guidance, comparable tests are indispensable, but, as indicated by the American Council cumulative record, they will yield

evidence of growth only when used systematically over a considerable period of time, and only when interpreted in the light of evidences from many other sources. The ability of school administrators and teachers to understand and act in accord with this conception has been widely demonstrated during the last few years in many schools all over the country, notably in schools participating in the Carnegie Foundation Pennsylvania Study and in member schools of the Educational Records Bureau.

As indicated earlier in this report, the test construction work has proceeded so rapidly during the past year that production is from one to four years ahead of schedule in several subjects. It is the opinion of this Committee that this production rate should be continued if possible, so that we may realize as fully as possible on the training and experience of those who have been collaborating in the difficult and highly technical work of test construction. If this rate can be maintained during the ensuing year or two, it is possible that our entire commitment in some subject matter fields may be fulfilled, thus releasing resources for fields that have not yet been covered, or for additional aspects of the fields in which some tests have been made.

In closing this report, the Central Committee would like to call attention to several new tests that have been added to the Cooperative list during the past year. One of the most interesting of the new tests is that in Contemporary Affairs, prepared by Doctors Eurich and Wilson and their collaborators at the University of Minnesota. This test was prepared in answer to a demand from a number of college leaders for a test that would measure the extent to which college students keep abreast of significant current events. Several colleges have discussed the desirability of giving this test at the end of the sophomore year as an indication to their students of what the colleges consider significant and as a warning of what will be given to them as part of their final comprehensive examination as seniors. The charge has frequently been made that college students do not become aware of significant problems and events of the day. It is hoped that the use of this test in the colleges will promote a more adequate appreciation of the

importance of contemporary affairs in the college careers of students. Some of the colleges that are planning to use this test regularly do not plan to give a course in contemporary affairs. On the contrary, they plan to make this an occasion for promoting habits of independent reading of significant contemporary literature on the part of their students.

The unusual productivity record of this year is due in no small part to the work of Dr. Tyler. He and his collaborators have added the equivalent of seventeen tests of normal length to our list: five in zoology and six each in chemistry and botany. These tests cover five differentiable objectives in each of the three sciences. While these tests were not completed early enough to be used extensively this year, it is our hope that a large program of college testing in chemistry, zoology, and botany may be organized next year on a scale comparable to the physics testing program of this year. The unique advantage of these new science tests is that they will permit colleges to measure the degree to which their students have achieved each of several objectives of science teaching, and to weight each of these objectives in any way that they may think wise.

The Central Committee is still convinced of the soundness of the Cooperative Test Service project, and is gratified by the progress and contributions it has already made, and by the effective cooperation it has enjoyed in all parts of the country, both in the immediate task of constructing the needed tests, and in the equally important matter of bringing the results of these tests to bear upon the philosophy and practice of constructive long-term educational guidance in our schools and colleges.

H. E. HAWKES, *Chairman,*
Central Committee on Personnel Methods,
Columbia University.

Report of Committee on Graduate Instruction

AS THE report was printed in full in the EDUCATIONAL RECORD for April, there is not much more to report for the committee. It is desirable to report the recommendations of the committee for further study. They recommend:

1. That the study of the rating of the graduate schools in the various fields should be revised ordinarily in three-year periods.

2. That a further study be made of appropriate fields of graduate work with the assistance of sub-chairmen in such general fields as Engineering, Languages, Social Sciences, Natural Sciences, Fine Arts, etc.

3. That a study be made of the production and absorption of Ph.D. graduates.

4. That a study be made of the teaching done by candidates for the doctorate; its dangers and opportunities.

5. That a list should be prepared of examples and methods of existing cooperation in graduate instruction and research between different institutions, and between corresponding departments in different institutions, for the purpose of further stimulating and extending such cooperation.

6. That deans of graduate schools should be invited to submit methods which they found useful in promoting inter-departmental cooperation in graduate training and research, and particularly in providing for desirable programs of graduate study which do not conform to any particular departmental program—yet without leading to multiplication of more or less standardized programs of study.

7. That a study be made of the level at which the graduate school can well take charge of the prospective graduate student.

8. In view of the fact that graduate work often causes a student to lose touch with culture, so that he becomes of less

value as a man and as a teacher, it is suggested that the dean of each graduate school appoint a standing committee charged with continual study of ways and means whereby the graduate students may, during their period of intensive specialization, be kept in continual touch with broadening cultural influences, with the conditions surrounding their fields of proposed work, and with any activities helpful in preparing them broadly for their life work.

9. It is desirable that deans of graduate schools consider problems such as the following:

(a) The total number of doctorates conferred in each field. Is the supply in any field too large?

(b) The desirability of seminars for discussion of American education.

(c) For what should the Ph.D. degree really stand: a demonstration of the capacity to do independent research work, or the ability to make an important discovery in science?

10. It is suggested that the graduate school has three very important functions:

(a) To produce new knowledge.

(b) The interpretation of new knowledge.

(c) The application of new knowledge to life.

The danger is pointed out of over-emphasizing the importance of the advancement of knowledge to the neglect of the responsibility for the interpretation of its significance to the people.

I would also call attention of the Council to the suggestion of the Committee relative to the Master's degree as given in the printed report.

Two corrections should be made in the report as printed in the April RECORD. In the department of Plant Pathology the name of Oregon State College should be substituted for University of Oregon, and in the department of German, the total number of doctorates conferred should be 75 instead of 995 as printed.

R. M. HUGHES, *Chairman,*
Iowa State College.

The Schools in Local Revival¹

MY FRIENDS, when we think of the Government, Federal, state or local, there come to mind almost instinctively mental pictures of policemen, sheriffs, county treasurers, income tax collectors, and political office holders. The reasons are obvious. Newspaper editorials and platform orators denounce daily the actions of some public official. Few people have not had occasion to know from personal experience the restraining hand of the policeman. And so government often seems to mean some restriction on individual liberty or some process through taxation of taking away from us a considerable part of our earnings for the benefit of some undeserving office holder.

Such a conception of government is as untrue as it is unworthy of a democracy. We join together in government; we pay our taxes for the purpose of mutual protection and in order that we may supply ourselves with facilities and services which through our own individual efforts it would be impossible to secure. In other words, the purpose of government is to obtain positive personal benefits. If there are limitations on our individual liberties, they are for the protection and in the interest of the greatest number.

There is one part of our Government, however, toward which the people generally have only the kindest feelings. I refer, of course, to the schools. Nearly every adult has children, grandchildren, nephews or nieces in school. Fond relatives watch their progress from grade to grade with keenest interest. So close to the people do the schools seem that almost universally they insist on electing by popular ballot the members of the school board. They realize that a large proportion of the tax dollar goes for the support of the schools, but the money is spent in the community and not in some far-

¹Two radio talks delivered June 5, 1934, as the nineteenth in the series Reviving Local Government sponsored by the National Advisory Council on Radio in Education and the National Broadcasting Company.

away place. To insure its expenditure for school purposes, patrons have joined educational administrators in insisting that school finances be separated entirely from other administrative functions. There can be no doubt that the people have a deep affection for their schools. They realize that the development of individuals and all aspects of social life depend upon the proper organization and support of the educational system.

It is a curious fact that certain aspects of our social life in which we have the deepest interest are not always allowed to develop as rapidly as other matters which are conceded to be of less importance. Sometimes, too, we respond more quickly and favorably to improvements in physical conveniences, such as an automobile or a mowing machine. In other words, in school affairs we are subject to tradition to a very remarkable degree. If the little red schoolhouse was good enough for us, we are inclined to think it is good enough for our children, and especially our neighbor's children. I desire to talk with you further about our schoolhouses in a few moments. I believe that what we do about our schoolhouses will determine in no small way the possibilities of local recovery.

We are now slowly emerging from the greatest economic depression in all our history. So long as the depression merely threw men and women out of work, so long even as families were merely in great want, we were not greatly excited about it. When, however, it began to be clear, through the falling off of tax revenues, that many of our social institutions, including our schools, were beginning to be in danger—when we saw evidence of our social structure beginning to crumble at the base, then, and then only, we determined to do something about it. Now we seem united through appropriate Federal, state, and local action to pull ourselves out of our difficulties.

Naturally the first obligation of the schools at the beginning of the depression was to economize in every possible way without at the same time impairing the quality of school service. This the schools have been glad to do. They have indeed set a fine example of unselfish service to other aspects of local government. Today one seldom hears further demands for

school economies. The people are convinced that money is not being wasted on the education of their children.

We have, however, in no field of government done as much as we should in order to secure the most economical and effective administration. At the present time there is a widespread realization that local governments should be thoroughly reorganized so as to do away with many useless and unnecessary office holders. Larger units of government can be just as responsive to public will as the smaller ones and far more efficient. Because of increased transportation and communication facilities there is no longer any point in so many small ineffective local units of government.

In this connection, may I remind you that we have the same problem relative to the schools. Today there are scattered from one end of this country to the other 143,445 one-roomed country schools. It is as difficult for them to do a thoroughly modern and effective piece of work as it would be for a farmer of today to harvest his grain with a wheat cradle. Both belong to a bygone age. I realize, of course, that there are still sparsely settled rural areas lacking transportation facilities where only a one-roomed school is feasible. In a very large proportion of instances, however, the consolidation of these schools is now thoroughly possible. A great network of roads supported by Federal, state, and local funds is being rapidly extended into almost every nook and corner of our great land. The markets, stores and cultural advantages of our larger towns and cities are now available to a large proportion of our population. One of the greatest blessings of our modern system of roads has to do with our rural schools. It is now feasible, as has been demonstrated in thousands of rural areas from one end of the country to the other, to consolidate a very large proportion of these small one-roomed rural schools into larger units. In other words, little red schoolhouses should be replaced with modern effective school plants.

Several weeks ago I heard the State Superintendent of Utah compare the situation in his state with a neighboring state of approximately the same population, wealth, and number of children of school age. In the neighboring state there were

hundreds of school districts, a relatively small proportion of the children in school, a fairly short school term, a small number of children per schoolroom, an unusually large number of teachers poorly prepared and poorly paid. In Utah, on the other hand, with approximately the same amount of money to spend on the schools, children are transported to modern consolidated school plants, they are taught in larger classes and are given an enriched school program. A much smaller number of teachers, better paid and better prepared, carry on the work. Increased economy and effectiveness were apparent everywhere. No one in Utah thinks of going back to the old one-roomed rural school.

In this connection may I point out that I do not by any means have the interests of the children exclusively in mind, although that alone would be ample reason for consolidating our rural schools. Many of you will recall with me, I am sure, in the rural school the literary societies, the singing schools, the social entertainments, the meetings of the grange, the Farmers' Alliance, the Sunday School, or some other community activity. All these activities have been greatly affected by the automobile and good roads, so that the one-roomed rural school is seldom the community center it was a generation ago. Yet the farming population of today wants something of this kind worthy of the present age just as ardently as in days gone by. The answer is the modern consolidated school building which has a small auditorium suitable for meetings of parents as well as children, where also plays and musical entertainments may be held. There should be a room or rooms for the meetings of women's organizations. Recreation facilities should be available. Surrounding the school plant there might well be frequently garden plots where both children and adults have opportunity to learn something more about the growth of vegetables and other agricultural products. In other words, we must envision new types of community life appropriate to modern conditions to replace a type of community rural life valuable several decades ago but now in need of enlargement and enrichment.

The question naturally arises as to how in these trying times

new consolidated school plants can be built. We are reminded that those school districts which, prior to the depression, took this progressive step now find it quite difficult in the face of decreasing income to pay interest and sinking fund on the bonds issued to erect new school buildings several years ago. Doubtless some of them sometimes question whether it was a wise step to take.

It should be remembered, however, that here, as in many other aspects of life, the Federal Government is contributing to the solution of this problem. According to the terms of the National Recovery Act, Federal funds have been made available for the construction of public buildings including schools. The Federal Government makes an outright grant of 30 per cent of the cost of the project and a loan of the other 70 per cent at low interest. More than \$75,000,000 has been set aside by the Federal Government from this fund during the past year for the construction of school and college buildings. Congress is now considering a bill making a further appropriation for the purpose of carrying on the public works program including the construction of educational buildings.

There is, of course, no way of predicting how long the Federal Government may engage in a public works program, but so far as the construction of consolidated school buildings in the rural areas is concerned the surface of the problem has only been scratched. It could, however, be solved with comparative ease. I have been reliably informed that with \$300,000,000, a sum which is only three-fourths of the amount being spent for roads in the present public works act alone, it would be possible to replace all of the one-roomed country schools in this country, which ought to be replaced, with modern consolidated school plants. I, for one, believe that such an investment on the part of the Government in the better education of our children would be eminently worth while. Certainly schoolhouses are as valuable as roads, and the Federal Government does well to invest in them.

On the other hand, nothing should be done to take away the sense of community ownership of and pride in the schools. The people should have a real responsibility for developing

school plants in keeping with their enlarging conception of education. Even though the process of making important changes is slow when all the people have to be convinced, it is nevertheless better in the long run that schoolhouses should be primarily a community investment and a symbol of the civic and cultural level toward which its citizens aspire.

GEORGE F. ZOOK.

MOST of the previous talks in this series of radio discussions on Reviving Local Government have dealt with financial aspects of the problem. They have told, for example, how various communities have reduced salaries and have struggled to cut out wastes and unnecessary duplications in public service in order to reduce expenditures; and have waged pay-your-taxes campaigns in order to increase income. We have thus been shown how, by such devices as these, it is possible to maintain essential public services within available resources even though income is sharply reduced.

The topic of this broadcast is "The Schools in Local Revival." If we were to treat it from the point of view of the previous broadcasts, the story is soon told. For, by and large, schools have taken their share of the budget cuts that have been made. In some cases these cuts have reduced school expenditures to zero. Then, either schools have been closed, so that several million children had no chance for schooling, or teachers have worked without pay. In other cases, where the cut has not been so drastic, some teachers have been let out, and schools have carried on as best they could with worn-out equipment to care for increasing numbers of pupils who came back to school because they could find nothing else to do. In short, though the financial debacle has put the teachers on short rations, their devotion to the children has kept the school system in operation with relatively little change.

If temporary budget cuts and meager material subsistence were all that school men and women had to endure, the situation would not be serious. For the struggle for existence is a perennial source of discipline and of strength. But the sad

fact of the past few years is the increasing evidence of the weakening of the faith of the people in their schools. In pioneer days the building of a school was one of the first concerns of every newly settled community. The little red school-house became, like the stars and stripes, a symbol of American aspiration. But now not only a scattered community here and there but even whole states permit their schools to close for lack of support because debt-service and road-building are regarded as prior claims on such resources as they have.

Of similar significance are the organized drives of taxpayers' associations to reduce school budgets, cut out the fads and frills and return to the good old days when the three R's were good enough schooling for anyone. Only recently a well-known and prosperous banking house refused to renew some school bonds of a solvent residential community unless they would reduce teachers' salaries and cut out music and art, though the town could well afford to maintain both.

The emergency relief work of the Federal Government has brought to light much evidence of the growing distrust of the people for current schooling. For example, the C.C.C. camps, by making a detailed inventory of hundreds of thousands of unemployed young men, have brought to light some of the specific reasons why the public question the value of present-day schooling for these thousands of young men. A recent editorial in *Happy Days*, a weekly newspaper written by the C.C.C. for the C.C.C., contains an editorial on this subject. After describing the sense of futility that haunted the enrollees before enlisting in the camp, that editorial ends with these words:

"Here we are in the C.C.C. We're 300,000 fellows out of work, unfit to handle a job, to vote intelligently, to choose a wife or to raise children. Yet, in ten years, most of us will have made a stab at all of them. And we'll have made a mess of it! Is America going to let our kids grow up to be the impractical, untrained and ignorant drifters that we are?"

How many Americans are now asking this same question? Probably most of those who are employed in the school system

are not inclined to take it seriously. But this C.C.C. enrollee is one of ten million unemployed. They all know the pangs of hunger in the midst of plenty. They are familiar with the fear of losing a job that haunts the forty-five million artisans who work for wages. In addition, many other millions are wondering how men who are products of our schools could be so illiterate economically as to lead or be led into such a depression as this. They note also the steady increase of racketeering, of bootlegging and of kidnapping by men and women whose schooling was presumably designed to help them become law-abiding citizens rather than lawless drifters. No; we protected pedagogues must not make the mistake of ignoring the seriousness of this question. Millions are asking it in all sincerity.

What can be done about it? School teachers know, even better than does the public, that conventional schooling does not meet the needs of a large proportion of the pupils, particularly at the high school level. But they are not allowed to do anything effective about it. If a teacher allows controversial subjects, such as public ownership of public utilities, to be freely discussed in schools, pressure is brought by big business on the school board to stop it. If high school youngsters are encouraged in school to find out how municipal government is actually run instead of learning from a book a paper theory of government, local politicians apply pressure to stop it. If the superintendent protests against padding of the payroll with salaries for the sisters and the cousins and the aunts of school board members, the school board will get him. If a few graduates of the school fail to meet requirements for admissions to college, pressure from angry parents soon forces the return to conventional paths. So the school teachers, though many of them know better, yield to one after another of these vociferous minority groups and the school program retains its traditional content and form which experience has shown offends none but the children, who cannot speak for themselves.

Recently the Board of Education in a well-known city in-

vited a small group of educators to consult with them about their schools. The town was facing bankruptcy. The budgets for all public services had been cut to the bone. The question was: Can the school budget be cut further without serious educational injury to the children? After careful investigation the consultants recommended a reduction in the number of subjects required of students and the introduction of activity programs that would tend to make the pupils do more work and the teachers less. By these changes the educational value of the work would be increased and the cost reduced some 10 per cent. The proposals were rejected by the school board. The reduction in teachers' work would have made superfluous some teachers who were friends of members of the school board and the activity programs would have made their program look queer when compared with the conventional programs of neighboring towns. The best interests of the children were of secondary importance.

So long as such conditions persist, schools will continue to turn out economic illiterates, dependents and drifters who will surely help little in local revival. If you like that sort of a thing, then you need do nothing about it. But if you want your children to have a better chance in life than you had, you better get busy and help break the vicious circle in which the teachers and the taxpayers have been chasing each other around for, lo, these many years, the former saying "We cannot give better schooling until we have more money" and the latter retorting, "We won't give you more money till your schooling is worth more."

Numerous schools have tried and are trying to break this vicious circle by giving better schooling for less money. For example, on the college level the University of Minnesota established two years ago what it calls the General College. Under the conventional college system it has been the habit there to weed out three or four hundred freshmen annually because of their failure to measure up to traditional academic standards. That flagrant waste of youthful energy and of public money at last so arrested the attention of the faculty

that it voted to scrap its ordinary requirements and offer these students a chance to come to grips with current problems that bear directly on the struggle for existence. During the first year over five hundred students were enrolled in the college. Instead of failing as they would have done under the old curriculum, most of them became enthusiastic workers in lines that interested them vitally. The responsibility for learning was transferred from the teacher to the student. The students made good. The cost to the State of Minnesota for this more vital instruction is much less than is the cost of the conventional instruction.

Another significant example of effective efforts of schools to give better schooling at less cost is the experiment which the State of Nebraska is making with two- and three-teacher rural high schools. Ordinarily in such high schools the content of the curriculum is limited to the subjects which the teachers can teach. In Nebraska any high school can secure, from the State University Extension Department, correspondence courses in whatever subjects any student desires to study. The student attends high school regularly and devotes a portion of the school time to the correspondence course under supervision of the high school teacher. In this way opportunity is given each student to work at something in which he is vitally interested. The students take the responsibility for their own learning and become interested workers instead of discouraged drifters. And, as in the case of the Minnesota experiment, the cost of such instruction is about half the cost of conventional instruction.

More such experiments as these would soon break that vicious circle. But such dynamic schooling cannot become general if schools are constantly repressed by minorities who fear their vested interests may suffer if the public knows too much. So look into your local situation. Find out if your schools are slaves of tradition and vested interests, turning out impractical, untrained, ignorant drifters; or whether they have defied tradition and the pressure of minority groups and are honestly trying to use all available school resources to help all

children grow into constructive citizens. No school can achieve this latter end and become a vital factor in local revival without the vigorous support of public opinion. The outcome rests in your hands.

C. R. MANN.

Constitution of the American Council on Education

1. NAME: The name of the organization shall be "American Council on Education."

2. OBJECT: The general object of the Council, and the basis of membership therein shall be to advance American education in any or all of its phases through comprehensive voluntary cooperative action on the part of educational associations, organizations and institutions and in the fulfillment of that purpose to initiate, promote and carry out such systematic studies, cooperative experiments, conferences, and other similar enterprises as may be required for the public welfare and approved by the Council. The Council was organized to meet national needs in time of war and will always seek to render patriotic service. It will also encourage international cooperation in educational matters.

3. MEMBERSHIP: The membership of the Council shall consist of three classes of members—constituent, associate, and institutional.

Constituent Members: This group shall consist of national educational organizations and such other bodies having similar interests as may from time to time be added by the Council.

Each organization shall be represented on the Council by three members who shall vote as a unit through a designated person. It is recommended that each organization, in the first election following the date of this meeting, elect one member for a term of one year; one for a term of two years; and one for a term of three years; and that all subsequent elections be for terms of three years. Elections of new members to the Council shall take effect immediately following such elections. Any election to fill a vacancy occurring during the year shall take effect at once, and shall be for the remaining period of the term thus filled.

The Council shall report its actions to the several organizations at the close of each year ending April 30, and at such other times as may be desired.

Associate Members: Associate members shall consist of such organizations having interests related to the work of the Council as may from time to time be elected by the Council. Associate members may send one representative each to the meetings of the Council, without right to vote.

Institutional Members: This group shall consist of colleges, universities and professional and technical schools of similar grade, and of other organizations and institutions of high standing that carry on educational activities or cooperate with educational institutions in improving instruction or administration. The conditions of eligibility for institutional membership, both for educational institutions and for other organizations, shall be fixed by the Executive Committee of the Council. Institutional members may send one representative each to the meetings of the Council. Whenever a vote is taken, if there are negative votes, the institutional members shall be counted separately and no action shall be valid unless supported by a majority of the constituent members present and voting. On request of any three members any matter directly affecting institu-

tional members shall be made the subject of a referendum vote by them before final action is taken by the Council.

4. DUES: The scale of membership fees shall be fixed by the Executive Committee. A portion of each membership fee shall be for one or more subscriptions to THE EDUCATIONAL RECORD at \$2.00 a year for each subscription, the number of copies to which each member is entitled being fixed by the Executive Committee.

5. OFFICERS: The Council shall elect a Chairman, a first Vice-Chairman, a second Vice-Chairman, a Secretary, a Treasurer and such other officers as from time to time may seem desirable. The Treasurer need not be a member of the Council. All funds for which the Council, or any of its committees, is responsible, shall be received by the Treasurer and shall be disbursed by him under proper authority.

The Council shall also elect a salaried Director, who shall be the chief executive officer. He shall have general administrative supervision of the affairs of the Council and shall be responsible for the carrying out of such plans and policies as the Council, or its executive committee, may approve. He shall be *ex officio* a member of the executive committee and of all standing committees. He shall report annually to the Council, and shall make such other reports as the Chairman of the Council may request.

All officers, except the Director, shall be elected at the Annual Meeting, and their terms of office shall begin immediately following election.

6. EXECUTIVE COMMITTEE: There shall be an Executive Committee consisting of eleven members, eight selected from the representatives of the constituent and institutional organizations, and the Director, Associate Director, and the United States Commissioner of Education *ex officio*. The Chairman and Secretary of the Council shall be Chairman and Secretary, respectively, of the Executive Committee. The remaining six members shall be elected by the Council, two at each annual meeting to serve for a three-year term. The Executive Committee shall hold meetings at least quarterly, and shall report its actions to the members of the Council after each meeting.

In case a member of the Executive Committee shall fail to attend (or to designate an alternate) at two meetings of the Executive Committee, he shall cease to be a member thereof. In case of a vacancy on the Executive Committee, the Committee shall have power to fill the vacancy until the next meeting of the Council.

7. PROBLEMS AND PLANS COMMITTEE: There shall be a Problems and Plans Committee consisting of twelve members, three of whom shall be elected each year for terms of four years. No member may succeed himself directly. Members of this committee shall be elected by the Council on nominations presented jointly by the Executive Committee and the Problems and Plans Committee.

In case of a vacancy on the Problems and Plans Committee, the Executive Committee shall have power to fill the vacancy until the next annual meeting of the Council.

The Problems and Plans Committee shall plan the research activities and other related projects of the Council and shall review continually all projects planned by the Committee and undertaken by the Council.

8. MEETINGS: The annual meeting of the Council shall be held on the first Friday in May. Special meetings may be called by the Chairman. The Chair-

man shall call a meeting at any time at the request of representatives of any three constituent organizations.

Written notice of all meetings shall be sent to all members at least two weeks in advance, except in special circumstances when this provision may be waived by consent of the representatives of two-thirds of the organizations constituting the Council.

Those present at any meeting of which written notice has been duly given, shall constitute a quorum for the transaction of business, but no action shall become effective until approved by representatives of a majority of the organizations constituting the Council.

9. BUDGET: The Executive Committee shall present a budget each year at the Annual Meeting, and no financial obligation shall be incurred by any officer or committee except as authorized by the Council or the Executive Committee. The fiscal year of the Council shall close on April 30.

10. TRAVELING EXPENSES: The traveling expenses of the officers and committees may be paid from the funds of the Council.

11. COMMITTEE APPOINTMENTS: The Council and the Executive Committee may appoint special committees. All committee appointments shall expire April 30, with right to reappointment. The members of committees may be selected from the members of any institutions associated with one of the organizations constituting the Council. Chairmen of committees shall be invited to sit with the Council, without right to vote.

12. AUTHORITY OF COMMITTEES: Final responsibility for all undertakings rests with the Council. The Executive Committee shall act for the Council between meetings, but shall refer all questions involving new policy to the members of the Council for letter ballot before taking final action. Committees are not authorized to commit the Council to any undertaking not specifically authorized by the Council or its Executive Committee.

13. AMENDMENTS: This Constitution may be amended at any time by vote of three-fourths of the organizations constituting the Council.

Written notice of any proposed change in the Constitution shall be sent to all constituent members of the Council at least two weeks before the meeting at which the proposed change is to be considered.

Officers of the American Council on Education, 1934-35

Chairman: Wm. F. Russell, Dean, Teachers College, Columbia University; representing Institute of International Education.

First Vice-Chairman: Sidney B. Hall, State Superintendent of Education, Richmond, Virginia; representing National Education Association.

Second Vice-Chairman: William D. Cutter, 535 North Dearborn Street, Chicago, Illinois; representing Council on Medical Education and Hospitals, American Medical Association.

Secretary: Rev. George Johnson, 1312 Massachusetts Avenue, Washington, D. C.; representing National Catholic Educational Association.

Treasurer: Corcoran Thom, President, American Security and Trust Company, Washington, D. C.

Director: George Frederick Zook. (Beginning September 1, 1934.)

Director Emeritus: Charles Riborg Mann. (Beginning September 1, 1934.)

Associate Director: John Henry MacCracken (Until September 1, 1934).

Executive Committee: For 3 years—Cloyd H. Marvin, President, George Washington University; Edward C. Elliott, President, Purdue University. For 2 years—Samuel P. Capen, Chancellor, University of Buffalo; representing Association of American Colleges; Guy E. Snively, President, Birmingham-Southern College; representing Southern Association of Colleges and Secondary Schools. For 1 year—F. L. Bishop, Dean, University of Pittsburgh; representing Society for the Promotion of Engineering Education; R. M. Hughes, President, Iowa State College; representing Association of Land-Grant Colleges. The Director, Associate Director, and the U. S. Commissioner of Education, *ex-officio*.

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- National Research Council.
- National Society of College Teachers of Education.
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Marquette University
Milwaukee-Downer College

WYOMING:

Wyoming, University of

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Appointment of the Director

DOCTOR George F. Zook, United States Commissioner of Education, was elected Director of the American Council on Education at the annual meeting last May.

Doctor Zook received his Bachelor's and Master's Degrees at the University of Kansas and his Doctor's degree at Cornell University. After an experience as Instructor and Professor of European History at Kansas, Cornell and Pennsylvania State, he joined the staff of the Bureau of Education in 1920, as Chief of the Division of Higher Education. During his five years of service in this post he established a reputation as a careful, scholarly investigator and as a source of sound counsel. For the next eight years, 1925-1933, he was President of the University of Akron, where to the background of historical scholarship and mastery of the problems of higher education he added a growing interest in and understanding of the entire range of education. He participated in many surveys. He served on committees dealing with many of the newer aspects of education, such as adult education, education by radio and motion pictures and religious education. He made a distinct and important contribution to the work of the National Advisory Committee on Education. Upon the advice of leaders in all branches of public education, the National Administration in 1933 practically drafted Doctor Zook as Commissioner of Education. One year later, when the American Council made its search for a director who would combine a scholarly background, experience and interest in higher education, and an understanding of the whole range of education, public and private, cultural and vocational, in school and out, it was only natural that our choice should have fallen upon Doctor Zook. We are highly to be congratulated that he is to be our Director.

At the same meeting in May, Doctor Charles R. Mann was elected Director-Emeritus. It is indeed fortunate, as we build for the future, that we shall continue to have at call the experience, the insight, the energy, the scientific point of

view and the wide acquaintance of the man who has done so much to advance the Council in the esteem of our people and in its service to American education.

WILLIAM F. RUSSELL,
Chairman.

Federal Aid for College Students

THE Federal Emergency Relief Administration has made available funds to pay approximately 100,000 students an average of \$15.00 a month each for part-time work while attending college during the coming school year. The primary purpose is to increase the number of college students, and so decrease the numbers looking for jobs. This is a continuation, on a larger scale, of the project in operation last spring, when 75,000 students were so aided.

The significant features of the new plan are thus described by Administrator Harry L. Hopkins in his letter of July 3 to State Relief Administrations:

"6. Funds allotted shall be used to pay students for doing socially desirable work, including the sort customarily done in the institution by students who are working their way through college, such as clerical, library and research work. Regular class instruction shall be excluded but students may be assigned to extension, adult education, recreation and other activities that increase the usefulness of the college to the community. Each institution shall pass on the acceptability of its own work projects. All jobs must be under the direct charge of the institution.

"7. Inasmuch as the principal objective of using relief funds for student aid is to increase the number of young men and women going to college, funds allotted shall not be used to replace college funds heretofore available for student aid. Ordinary maintenance work about the college, waiting on table in dining halls and other routine activities that would have to be carried on anyway shall be financed from the usual sources, not from F.E.R.A. funds. Violation of the spirit of this provision shall be considered a cause for withdrawing a college's entire allotment of student aid funds and assigning it to other institutions."

It will be noted that these regulations offer an opportunity not only to employ students on the campus but also to develop, with their help, valuable relations with useful community enterprises. Because of the novelty and significance of this opportunity the Committee on Cooperation in Federal Projects of

the American Council on Education volunteered to cooperate with the F.E.R.A. in helping colleges and universities realize the desired results. This report describes its activities in this matter.

Exploration of the possibilities of this new proposal was begun by inviting representatives of a number of public and semi-public welfare agencies in the District of Columbia to confer with representatives of five local universities. The possibilities and the difficulties of finding new jobs that are socially beneficial and that increase the usefulness of the colleges to the community were discussed. As a result, each university agreed to assign a member of its staff to a committee to make a search for appropriate new jobs in the District of Columbia and each welfare agency agreed to give this committee as many practical suggestions as possible.

This committee divided the field, one taking charge of public health, others of recreation, education, libraries and museums and social agencies. In order that the results might be comparable, each sought answers to the following seven questions:

1. What is the nature of the work to be done by the student?
2. Would the work be done if students were not available?
3. How many hours per week and what hours (A.M. or P.M.) are students wanted?
4. Is the work temporary or will it last through the school year?
5. Can the work be done by any college student or is specialized training (medicine, law, etc.) required?
6. Have you any preference with regard to the sex or color of the student working?
7. List each type of job with brief description of the work.

Returns were received from more than fifty agencies. Over 300 projects were suggested, offering appropriate job opportunities for 1400 students. Since the quota of eligible students for the District of Columbia is about 800, this list, though not at all exhaustive, gives the universities a practical basis on which to begin placing students in extra mural jobs that serve the purposes both of relief and of education. This

list has been printed and will be sent without charge on request.

The District of Columbia is unique. Therefore, to determine how far the procedure used there is applicable elsewhere, it was tried out in several Virginia college towns. Contact was first made with the State Department of Education at Richmond. A conference was arranged with representatives of the six local colleges that are recognized by that department. These representatives themselves had neither the time nor facilities to make a survey of local job possibilities similar to that made in Washington, but agreed to act as a local committee to consider applications for student help made by local public and semi-public service agencies.

To stimulate such applications, interviews were held with officers of the State Departments of Public Health and Conservation and with the Municipal Department of Play Grounds, as well as with the Richmond Council of Social Agencies, the Virginia Historical Society, the Museum of Art and the Garden Homesteads. Several already had undertaken projects in which students could render useful service. For example, the Department of Public Works of Richmond desires to complete an inventory of the real property of the city as well as certain city planning charts and traffic surveys, which had been begun last year as C.W.A. projects. Completion of these would be the means of bringing a large increment of tax revenue and much greater equity of taxation and would provide the requisite data for development of a slum clearance and housing movement. Similarly, the Virginia Historical Society has numerous documents which it wants to catalogue to render them available to students and to the general public. The local relief committee also needs help in making case studies of individuals on relief. All of these agencies agreed to formulate specific statements of their needs and to submit them to the local college authorities.

At the University of Virginia it was found that plans had already been made to assign most of the students on relief funds to work about the campus, as was done last spring. Inquiry of agencies in the neighborhood revealed that the local relief administration needs additional helpers for case

work among its clients on relief, particularly for cases requiring nursing and home instruction. This offers a fine opportunity for extra mural employment of nurses from the Medical School, as well as of students of sociology and home economics. The relief cases also frequently need legal advice, which offers opportunity for a free legal clinic administered by advanced students in the Law School. The County Superintendent of Schools of Albemarle County reported at least 8,000 white illiterates in the county about whom nothing is being done. As a result of finding these and other similar opportunities, the University appointed a faculty committee to study the situation and approve allocation of students to extra mural work. This committee has approved the allocation of four students to the State Geological Survey, ten to the Water Resources Division of the State Department of Conservation, and ten to various departments of the City of Charlottesville for special local studies.

The State Teachers College at Farmville presented a particularly interesting case. Located in a small rural community, there are as many young women in the institution as in the rest of the population of the town. Hampton Sydney, a liberal arts college for men, is located in the open country about ten miles distant. Neither of these institutions had attempted to discover any socially desirable extra mural work for students meriting relief funds.

Conferences there with the County Agricultural Agent and the Home Demonstration Agent of the U. S. Department of Agriculture, with the local relief administrator, and with the editor of the county newspaper disclosed the fact that farmers in the district are confused as to the meaning and the implications of enterprises initiated by the Agricultural Adjustment Administration, by the Federal Farm Credit Administration, and other recently inaugurated Federal activities. Farmers would gladly attend conferences at which questions that bother them might be simply discussed. The editor would gladly print the essential points of such discussions and conduct a question and answer column if college faculty or students would edit it. Case studies of the actual operation of New

Deal legislation throughout the county might readily be made by students, and would be helpful not only to those concerned but also to the various agents of the Federal Administration in aiding them to overcome the actual difficulties encountered under the conditions peculiar to that particular locality.

Further investigation revealed a demand for elementary skill in handicrafts, drawing, tool-making and decorative arts. Folk songs and folk dances still exist among some of the older people in this rural community, even among the illiterates, yet nothing is being done to encourage their retention and development. The ancient cultural traditions of the locality have probably never been studied, analyzed and recorded.

Cooperation has now been established between the two colleges and the various county officials to discover the specific needs of the people in the county and to develop an educational program that meets these needs.

In addition to these necessarily hurried surveys, the Council's committee also held conferences with representatives of a number of Governmental agencies to obtain cooperation in presenting to colleges opportunities for the socially desirable work intended by the F.E.R.A. The first approached was the Employment Service of the Department of Labor. Many thousands of young people of college age are enrolled with this service. Many belong to the 70 per cent of our population of A and B grade intelligence that does not get any higher education. The emergency relief funds would obviously be well invested if some of these gifted young people might be guided to further educational opportunities. The Employment Service now has instructed its agencies to scan their employment rolls and advise those young people who are seeking work and have capacity for higher education to apply to colleges for the F.E.R.A. stipend.

Similarly, the Director of Extension Work of the U. S. Department of Agriculture, when he heard the story of the Farmville Normal School, wrote to the State Directors of Extension, suggesting that they apply to nearby colleges for student help in county work. This letter contains the following paragraph:

"In explaining the objectives of the A.A.A., the Farm Credit Administration, in furthering crop readjustment and diversification, farm refinancing, better housing and home modernization, as well as in the ordinary work of extension in agriculture and home economics, it seems to us that you may find it possible to use certain students from the nearest colleges as assistants in your offices in one or more of these projects this winter. At the least, they may be of clerical service to you, a certain number of hours each week, if transportation can be arranged. At best, they may render valuable assistance in educational work, in leading discussions with community leagues, meeting 4-H clubs, or possibly conducting regular columns in the county newspaper with the cooperation of the editor—that may supply authentic and useful information to readers concerning the objectives of the Government and the local operations of its various new agencies."

Another interested Federal agency is the Consumers' Division of the National Emergency Council. This Division is organizing local Consumers' Councils in two hundred counties this winter. The job of each is to study specific results of New Deal policies with individual consumers. The projects contemplated include studies of family consumptions and expenditures, particularly in families with low incomes; retail food price surveys in cities not covered by the Bureau of Labor Statistics; a survey of the number of retail outlets and retailers' "mark-ups" or gross profits; a survey of the cleaning and dyeing industry as already carried out in Indianapolis and Louisville; and a study of the effects on consumers of State anti-trust laws and municipal licensing regulations. Participation in any or all of these projects would obviously be of educational value to the students whether they receive Federal stipends or not.

The Commissioner of Labor Statistics is also much interested in the studies proposed by the Consumers' Council. He is willing to supply supervision to groups of college students that desire to undertake such studies as the expenditures of families of employed wage-earners. Schedules will be supplied by the Commissioner of Labor Statistics showing what information should be gathered from individual families in a house-to-house canvass.

The Director of the educational activities of the C.C.C. has advised the educational advisers at the various camps that student service may be secured from neighboring colleges to help in the school work in the camps.

The Brookings Institution is preparing a list of questions concerning State finances, answers to which are desired simultaneously from all States. The Institution is suggesting to the Departments of Government of State Universities that advanced students be given responsibility for securing these data as part of a national survey now in process at the Brookings Institution.

There are many other ways in which college students may participate in local volunteer efforts to improve living conditions and in so doing get rich educational experiences. For example, last year Citizens' Councils for Constructive Economy were organized in several hundred localities. These are studying the political and economic management of their respective towns. Students in high school or college could get no better introduction to political science than through participation in such factual surveys of the actual conditions in the home town.

In Vermont last year the State Chamber of Commerce offered a trophy to the high school that would make the best charts of local income and expenditures over the past five years. This enterprise aroused large interest among the students and resulted in better public understanding of the actual financial conditions within the State.

Though the Federal Emergency Relief Administration is supplying substantial funds for helping needy students participate in practical community enterprises of the sort just described, educational institutions should not assume that such participation is to be limited to students who receive Federal stipends. Clearly, the educational benefits to be derived from such practical cooperation and first hand contact with actual conditions of life have enormous educational value for any who partake in them. It is to be hoped, therefore, that this proposal of the Federal Emergency Relief Administration may turn out to be the overt act that initiated a widespread

development of this sort of cooperation between the college and the community for their mutual benefit. To aid in the achievement of that much to be desired result is the chief purpose of this report.

In these days of rapid political and social changes it is high time that the ancient aloofness between town and gown be broken down. America needs now as never before young men and women who not only have their intellects disciplined by higher training but who also have their feet on the ground so that they can deal realistically with actual conditions. After all, such cooperation between town and gown is the essence of the true spirit of the University. For the University does not exist to teach. Everything else does that. The University exists to discover and to create—to discover truer values in life and to create practical means for realizing them in action.

C. R. MANN, *Chairman.*

The Copeland Experiment in the District of Columbia

IN THE United States today the average age of the prison population is 23 years. The largest age group is found at 19 and the next largest group at 18. Most criminal careers begin in childhood.

The foregoing facts are three of the most significant findings established by the hearings conducted by the United States Senate Sub-Committee on Racketeering and Crime last year. These facts led the Chairman of that sub-committee, Senator Royal S. Copeland of New York, to institute a campaign for strengthening the public schools in their treatment of anti-social tendencies in children. His challenge to the schools was delivered to the Department of Superintendence of the National Education Association at its meeting last February in Cleveland, and to the American Council on Education at its meeting last May in Washington. Both of these challenges have been given wide publicity.

Having spent most of his life in medicine and public health, Senator Copeland fully understands the enormous advance that has been made in these fields by clinical methods of work. Hence he pointedly asks, why not approach the attainment of mental, moral and social health in much the same way as we approach that of physical health? The doctor deals with patients as individuals. Why should not the teacher deal with the children as individuals? The doctor makes an individual record of the normal characteristics of physical health and the exceptional symptoms that he observes in each patient. Why should not the teacher do likewise? On the basis of such records the doctor diagnoses the physical strengths and weaknesses of his patient. If the teacher had an analogous record he could help each pupil make a diagnosis of his own strengths and weaknesses of character. In the case of good health the doctor prescribes regimens that maintain and develop health. In the case of illness, the doctor tries to help the patient achieve normal development of health through attention to

normal patterns of activities. Certainly the teacher can do likewise when the diagnosis reveals incipient anti-social tendencies. In the case of physical illness the doctor has the legal authority to disrupt the child's prescribed school program in the interest of physical health. Senator Copeland asks educators whether it is not time for those in the educational system who are responsible for health of character in children to give precedence to prescriptions for moral and social health over prescriptions for academic work.

This shift of emphasis from obedience to the mass prescriptions of a required curriculum to prescriptions adapted to the individual needs as shown by appropriate diagnosis and behavior records, Senator Copeland terms the clinical approach to education. His specific proposal to the schools is that they use every resource of research and experimentation to develop this clinical method of treatment as rapidly as possible.

With the enthusiastic approval of the Board of Education of the District of Columbia the experiment proposed by Senator Copeland has been undertaken in the public schools of Washington under the direction of Superintendent Frank W. Ballou. In June of this year, the Seventy-Third Congress added approximately \$70,000 to the ten million dollar budget for the public schools of the District of Columbia at the request of Senator Copeland and the Board of Education for this purpose. Washington was selected for this study, partly because it was a convenient location, partly because Superintendent Ballou and the Board of Education are enthusiastic about the project, and partly because the teaching corps of the city has been working upon the problem for the last five years. The purpose of the appropriation is to provide for adequate experimentation to discover how the desired results can be secured at the lowest cost.

In setting up the program, it was decided to use a spear-head attack, or, in other words, to work in a small area most favorable to success, make it as effective as possible, learn from this experience and extend into other areas as soon as practicable. In following this plan five white schools and five colored schools were selected on the elementary, junior high,

senior high, night high, and vocational school levels. The fourth grade in the elementary school was brought into the project, the seventh grade in the junior high school, and the tenth grade in the senior high school. In 1935 the fifth, eighth, and eleventh grades will be added, and in 1936 the sixth, ninth, and twelfth grades will also be included. In 1934-35, approximately 175 teachers and 5,500 pupils are directly included in the project.

In preparing the program for 1934-35, a three-week conference was held beginning June 25. In attendance at the daily three-hour conferences were the superintendent, the two first assistant superintendents in charge of junior and senior high schools, the two assistant superintendents in charge of elementary schools, the assistant superintendent in charge of the project, the two assistant superintendents in charge of the research departments, the two supervising principals of the divisions in which the two elementary schools were located, the director of the attendance department, the director of the community center department, the statistical officer of the system, the principals of the schools with their assistant principals, and the presidents of the two teachers colleges—a total of 28 persons.

The chairman of the conference was W. W. Charters, whose function was to assist the group to set up a program which would fit the local situation and express the ideas of the school corps. To assist in the consideration of new records and of individualized education, Ben D. Wood was present for a few days. To advise concerning the measuring program, Ralph W. Tyler was present for one conference. C. R. Mann was in regular attendance as a member.

At the first meeting agenda of the conference were formulated. At the final session the following résumé of the work of the conference was presented to throw into relief the logical structure of the program as worked out from day to day:

I. BASIC PRINCIPLES OF THE PROGRAM

The conference first concerned itself with a statement of the basic principles which should underlie any program

of character education, and tentatively agreed upon the following:

1. The personal aim of education is to help each child develop the desire and the power to make the right choice in any conduct situation.

2. The job of the teacher is to teach children, not subjects.

3. Individualized education emphasizes the facts that the whole personality of the child—intellectual, aesthetic, social, physical, and moral—is involved in his education; that the development of social and moral qualities is of equal or greater importance than is the acquisition of information; and that the school must take cognizance of the extra-school life and living conditions of the child. Promotion and graduation, as well as the curriculum of the school, must logically follow these lines of emphasis.

4. General behavior patterns (the virtues, conventions, moral traits, or mores) derive their importance from the appreciation of values which they promote in the individual child. They are not ends in themselves.

5. The behavior of an individual is determined by his personal scale of values. Those things which a person feels to be most worth while dominate his actions and decisions. Hence it is a primary concern of teachers to help each child develop an ever truer scale of values.

6. Attitudes, desires and urges are controlling factors in behavior. To help the child learn to want to do right is a major responsibility of schooling.

7. Clear thinking is essential in meeting new situations and changing conditions effectively. Helping children learn to think their way through in perplexing situations is a major obligation of schooling.

8. Fundamental habits, virtues and conventions care adequately for wide areas of behavior. Such habits, when of durable value, should be developed by the school within the situations to which they apply.

9. A sense of enduring satisfaction with work done accelerates the learning process. An effective school conducts its exercises with an atmosphere of friendliness and good will and gives generous credit for the simple achievements of the child.

10. The most wholesome growth results when environmental conditions are favorable. It is the obligation of the school to see to it that the child's life is adequately pro-

tected, and that all kindred school and community organizations and institutions, including the home, are stimulated to provide appropriate conditions for the development of children.

11. An expanding philosophy of life makes for continuing growth. This is promoted when children are encouraged from time to time to formulate their own best judgments of what immediate goal is most worth while and to organize their behavior to achieve that goal.

12. Growth and personality are best promoted when children think and act in situations which are real to them. Reality to the children concerned is a prime consideration in selecting the activities that make up the program of every school.

13. All education is self-education. In every school the children who are being educated actively participate in planning school activities, in carrying the plans out, and in evaluating the success of their efforts.

14. Concord of desire is the motive power that impels men to create useful social institutions. Such concord develops naturally when environmental conditions encourage free expression of such fundamental and universal human emotions as common neighborly good will, creative impulse, passion for excellence, joy in useful achievement, love of beauty, skill, hunger and thirst for understanding. It is by ever fuller realization in action of these universal human desires that personality becomes integrated in growing people.

II. INDIVIDUALIZED EDUCATION

Proceeding to more specific elaboration of the central theme of these statements, we have adopted the position that our program is a program of individualized education—that the function of our schools is to teach children rather than to teach subjects. In reducing this general idea to a form concrete enough to be followed in teaching situations, we have adopted eight criteria by which to determine whether or not education has become individualized. These criteria, stated in the form of questions, run as follows:

1. Is your objective the improvement of the individual as a social being?
2. Is the pupil successful in doing what has been assigned

to him? Does the child realize that he is successful, and does he get that satisfaction which comes only from success?

3. Is the pupil really interested in what he is doing and satisfied by doing it?

4. Does the pupil work aggressively without external compulsion?

5. Is your prescription based upon sufficient information regarding the abilities, interests, and needs of the pupil as a social being?

6. Do you recognize that your prescriptions are instrumental and provisional rather than objectives made and handed down which must be achieved at all cost?

7. Does your prescription take account of extra-school influences upon the learning habits of your pupils?

8. Is your judgment of the success of the pupil based upon what you think the pupil can do or is it a mass standard?

In learning situations three essential factors contribute to effective growth and deserve special attention. The first is the integral relations of action to desire, interest, and the primary urges. To achieve the outcomes of education, it is necessary that pupils' desires and urges be directed so that they will want to achieve worthy outcomes. Consequently the attention of the teacher must be directed to developing emotional attitudes favorable to such outcomes. The second of these is the law of effect, which means that growth tends to feed upon success and indicates the necessity for teachers' helping children to feel the glow of satisfaction which should follow their simple successes. The third is the central position of thinking in all new situations. If teachers can teach a pupil how to think carefully and sincerely in the situations which face him, they need have little concern about the solutions he arrives at.

III. DEFINITION OF CHARACTER EDUCATION

We have differentiated our so-called character education program upon which we are entering from the usual programs of schools in two respects. This definition is necessary because in the last analysis all education is character education.

In the first place, we are concerned with ten areas of experience for exploration by pupils in contrast to the more re-

stricted areas ordinarily followed in schools, and have set up definite outcomes to be achieved in each area. In presenting these areas and their outcomes the task yet remains in our planning procedures to allocate to the four divisions of the twelve years the responsibility of each in achieving these outcomes. The areas to which all the children of the schools should be exposed and the outcomes that each at the level of his capacity should achieve are the following.

IV. OUTCOMES AND AREAS OF EXPERIENCE

1. *Health activities.* The field of health activities is understood to include both mental and physical health. Every child:

(a) Is interested in his own mental and physical health and that of the community.

(b) Establishes an adequate set of personal health habits based on the facts of physiology, psychology, and hygiene.

(c) Promotes mental and physical health activities of home, school, and community.

(d) Understands the important relationships that exist between mental, moral, and physical health.

(e) Reads health information in magazines and newspapers with intelligence.

2. *Intellectual activities.* Every child:

(a) Sees both the social and the scholarly values of the subject matter pursued in his courses and desires to make it his own.

(b) Thinks independently and discusses important matters with intelligence.

(c) Gets a satisfying after effect from his classroom exercises.

(d) Sets for himself advancing goals and standards of excellence.

(e) Has an intelligent respect for scholarship.

(f) Has facility in reading and in the use of oral and written English.

3. *Economic activities.* Every child:

(a) Understands the considerations underlying the spending, saving, earning, and giving of money.

(b) Uses money intelligently.

(c) Is interested and intelligently informed about current economic problems, and forms his own tentative solutions.

(d) Understands the workings of the common economic institutions with which he comes in contact, such as banking, retailing, etc., from the consumer's point of view.

(e) Sees the economic institutions of society as agencies for promoting social welfare.

(f) Reads with facility economic materials written for the layman.

4. *Vocational activities.* Every child:

(a) Appreciates the dignity and importance of labor.

(b) Enjoys the experience of working at his daily tasks.

(c) Studies with intelligence the occupations that may be open to him, and makes his choices in terms of their opportunities and his own capacities and limitations.

(d) Understands the basic structure and functions of the industrial life of the nation.

(e) Reads and understands the materials in this field written for the layman.

5. *Political activities.* Every child:

(a) Has an ingrained and intelligent respect for law.

(b) Is interested and intelligently informed on the current political problems, and forms his own tentative solutions.

(c) Accepts the obligation of every citizen to participate in the civic life of his community, state, and nation.

(d) Understands the workings of governmental agencies with which he comes in contact, such as courts, Congress, and local commissions, from the point of view of the citizen.

(e) Sees political institutions as methods of promoting social welfare.

(f) Reads discussions of political issues with intelligence.

6. *Recreational activities.* Every child:

(a) Thinks of recreation as a component part of his life and finds a place for recreation in his daily program.

(b) Enjoys participation in a variety of well selected recreational activities.

(c) Establishes the beginnings of wholesome leisure-time activities.

(d) Acquires attitudes and habits of cooperation, good sportsmanship, and leadership in recreational activities.

7. *Sex, parenthood, and family life.* Every child:

(a) Sees sex as one of the great moving factors of civilization.

(b) Has an understanding of reproduction as a biological process.

(c) Participates intelligently and with good will in the life of his own family.

(d) Sees the family as the basic unit of society.

8. *Social activities.* Every child:

(a) Has a concept of himself as a valuable member of his group with opportunities and obligations.

(b) Participates in group activities from inner interest rather than from outer compulsion.

(c) Practices the ideals of fair play and friendliness in his group relations.

(d) Appreciates the values of friendship and chooses his friends with these values in mind.

(e) Consistently seeks to understand the point of view of other people.

(f) Has mastered the courtesies involved in living happily with others.

(g) Is quick to appreciate the efforts and contributions of other members of the group.

(h) Realizes that his own personal development is the greatest contribution that he can make to the group, and accords every other member of the group the right to develop in his own way.

(i) Analyzes situations and makes choices with understanding and with consideration for the welfare of others.

(j) Uses the contributions of his groups to advance his own plans for wholesome development.

9. *Aesthetic activities.* Every child:

(a) Has good taste.

(b) Has an intelligent interest in art, literature, music, and drama.

(c) Has an understanding of these arts as major factors in the evolution of civilization.

(d) Has an appreciation of the aesthetic arts, and within his capacity expresses himself through several media.

(e) Likes to read literature, visit exhibitions of art, attend the theater, and listen to musical programs.

10. *Religious activities.* While it is the obligation of the church and not the function of the public schools to give religious instruction, every child should:

- (a) Respect religious ideals.
- (b) Perceive the influence of religious thought in civilization.

V. BEHAVIOR PATTERNS OR TRAITS

A second method of differentiating our individualized education program from the usual conception of school education lies in the fact that we are directly interested in a wider range of ideals and behavior patterns. School programs are usually concerned with those characteristics of personality which aid in the mastery of subject matter, such as scholarliness, thoroughness, scholastic ambition, and competitiveness. Our program has through the years increased this range, as indicated in our School Document No. 9, 1931 (Preliminary Report on Character Education in the District of Columbia), until we now agree to set up behavior patterns of seven kinds, all of which are to be emphasized as outcomes of our program. These seven groups of behavior patterns are conceived in the following fashion:

1. *Intelligence*: resourcefulness, brightness, keenness, discrimination, scholarship, objectivity, ability to plan, foresight, breadth of interest, good judgment, originality.

2. *Honesty*: fairness, justice, integrity, open-mindedness, tolerance, sincerity.

3. *Friendliness*: courtesy, kindness, neighborliness, generosity, sympathy, understanding, considerateness, cheerfulness, sociability, unselfishness.

4. *Efficiency*: accuracy, skill, carefulness, neatness, speed, thoroughness, promptness, punctuality, thrift.

5. *Cooperativeness*: self-control, team work, dependability, responsibility, tact.

6. *Forcefulness*: initiative, drive, persistence, confidence, industry, concentration, courage, enthusiasm, ambition, fluency, decisiveness.

7. *Good taste*: refinement, love of the beautiful, good personal appearance, dignity, poise, appreciation.

NOTE: Differences of opinion concerning the classification of this sort of behavior patterns is inevitable but unimportant. The essential consideration is the inclusion of valuable patterns. Neither is the list complete, but it is believed that the classes represent a practical short list of desired types of behavior.

The outcomes have been stated in two forms in order to clarify two important aspects of the problem. While a casual reading might suggest that either form is complete in itself, a critical study will show that each part supplements the other.

Areas and outcomes indicate the approach to the problem. Character develops through experience. The outcomes suggested focus attention on the growth that results from participation in widely varied activities of life. They become a basis for constructing a school program. But such a series of specific outcomes never includes all the desired results of education. Unless those responsible for the school program have these more generalized types of behavior in mind, the possibilities inherent in school situations may not be fully realized.

The list of behavior patterns meets this need. Such groups of personality traits have been utilized since the beginnings of recorded time to designate certain desirable behavior patterns. These concepts are based on racial experience. They are familiar and convenient statements of universally recognized human values. Used as an approach to the problem of character education, such traits tend to become platitudes. Used as criteria by which to check the results of the school program, such concepts furnish the basis for evaluating particular cases of behavior not included in the list of specified outcomes.

VI. RECORDS OF BEHAVIOR

Having accepted the concept of individualized education as the principal method of reaching our stated objectives, it became necessary for us, first of all, to devise machinery by which teachers will be able to learn much about their pupils. This involves the collecting and recording of vastly more in-

formation than is now available in usable form. We therefore turned our attention to the development of records of several varieties. First, we decided that certain minimal facts (to be worked out) shall be collected on all children. We next decided that current records of characteristic and significant actions of children shall be collected by teachers and officers as so-called anecdotes. We decided in the third place that, for problem children and for children who are taken to court or to the judge of the court, detailed case studies shall be made wherein all useful data that could be collected from the school records, from psychiatrists and other specialists should be assembled and used in diagnosing the maladjustments of these children and setting up remedial procedures. We also added to these records the results of interviews with guidance officers. All of these materials we decided to assemble in record *folders*. Finally we agreed to summarize the most significant data in the folders upon record *cards* for ordinary use.

VII. GUIDANCE

This material will be collected from many sources, primarily for the use of those persons in the schools whose function is to understand each child as an individual and in the light of his understanding to aid him to develop wholesomely and vigorously. Our program therefore calls for guidance officers who may be teachers, home room teachers, counselors, principals, or other officers. The location of this responsibility is yet to be determined.

VIII. FLEXIBILITY OF ORGANIZATION

The acceptance of individualized education as a primary concept makes necessary a flexibility of organization and administration greater than has been developed under the concept of mass mastery of subjects. In general, this flexibility will be guaranteed when Superintendent Ballou secures, as announced, the suspension of rules and regulations of the Board of Education which will admittedly handicap a flexible program. The schools will then need carefully to consider what modifications will be beneficial to the progress of our program.

IX. CURRICULUM REORGANIZATION

The pursuit of the concept of individualized education leads logically and inevitably to curriculum reorganization, the addition of new subjects, the modification of the outcomes of subjects now taught, flexibility of subject compartments in the lower grades at least, and the modification of the content of specified courses to meet the needs and capacities of individual children. This is a major task which must be worked upon continuously and concomitantly with other problems of the project. Its importance and difficulty are greatest in the senior high school area.

Specifically, it is advisable to expect all teachers in the autumn to state what contributions they hope to make to the outcomes of the project, and at the end of the year to assess their efforts and indicate improvements they foresee in working upon the project in a second year.

X. GIFTED PUPILS

A program of individualized education demands attention to gifted children who ordinarily waste their precious capabilities because they are not given opportunities commensurate with their abilities. Experiments in individualized instruction can be undertaken to allow pupils with the aid of self-teaching materials to proceed at their own rates of progress. These will be cared for upon an experimental basis.

XI. MORALE

Obviously in carrying out such a program, which admittedly cuts across the life habits of those who are teachers of subjects, the continued enthusiasm of teachers and their persistent commitment to its aims are essential. Therefore the establishment of a high morale is clearly indicated and this is in the last analysis dependent upon the vigor, resourcefulness, persistence, and leadership of the principals and all other major officers. The whole hearted participation of the children in the adventure is central in importance. This emotional factor must be fostered and strengthened.

XII. IN-SERVICE TRAINING

Logically this demands the in-service training of teachers by the principals and the teachers colleges through the provision of reference material, conferences, faculty meetings, and particularly by the positive leadership of the principals. Since the success of the project rests finally upon the skill and interest of the teachers and the enthusiasm and cooperation of the pupils, we shall give major attention in our program to in-service training.

XIII. THE SCHOOL AND THE COMMUNITY

Proceeding from the school to the community, we hold that the school is only one agency among many which mould the characters of children. Two obligations follow. It is our responsibility to enlist every agency in the community to contribute to the wholesome development of children. Some of the agencies can be stimulated to make good children better by providing increasing facilities for happiness; other agencies can contribute services for making bad children better through remedial assistance. The community agencies in this city are already unusually active in these directions.

But on the other hand, the schools are obligated to stimulate the improvement of unwholesome agencies and environments. The schools are charged with a primary responsibility for seeing that the child is everywhere surrounded by influences which will promote his growth in character and personality.

Since the schools serve the public, it is their obligation to interpret their program to the parents of their children. If the public understands, it is our conviction that they will believe in the project as fully as we endorse it and will support it in a multitude of tangible and intangible ways. But in all discussions with citizen groups it is necessary cautiously to insist that since many independent forces mould the character of the child, the efforts of the schools alone are not equal to the total task of rearing good citizens.

XIV. THE PROJECT'S PLACE IN THE SYSTEM

In relation to the schools of the city not included in the present program, two points must be kept in mind. First, this project has a double purpose; namely, to develop a program as favorable to character education as possible and to discover methods of making the program as low in cost as is possible in relation to effectiveness so that when the project embraces all the schools of the city the total costs shall be as little as possible and still be highly effective. In this lies the wisdom of a spear-head program. Second, all the schools of the city should continue to improve the programs that they have set up. They will contribute ideas for the use of the schools in the project, and will be provided with suggestions that grow out of the experiment. Unless this project is seen by all to be an integral part of a city-wide activity, the results will be unfortunate.

XV. DISTRIBUTION OF IDEAS

On the technical side we have decided that two widely different procedures will be useful. On the one hand we are convinced that the spread of excellent methods of developing personality is materially aided by the collection of methods used by teachers in all parts of the system and by the publication of these methods for the use of teachers in all parts of the system. We have therefore set up machinery for establishing a city-wide reservoir of experiences to be fed out to those who want to use them.

XVI. APPRAISING RESULTS

On the other hand, we believe it necessary, in carrying out a program into which money and effort are generously poured, to measure our results. Such measures will be largely subjective and only in part of objective validity. Yet, believing that a mass of approximate facts is better than the unsupported opinion of scattered individuals, we are setting up a comprehensive program for measuring our efforts as accurately as we can.

XVII. PROPOSED PLANS FOR 1934-35

In conclusion, we have prepared detailed but tentative plans to be put into operation next year after they have been studied and modified by the teachers in our selected schools. We assume that these are tentative plans because the teachers must have an active part in their final formulation, and we shall probably modify our own plans upon further thought before the opening of school.

It has become apparent that as the conference has progressed our enthusiasm has deepened and our ideas have clarified. We are increasingly convinced that the project is a major undertaking and that if we are reasonably successful we shall be able to make some contribution to the history of education in America. We shall assemble our teachers in the autumn with a serious understanding of the importance of our undertaking.

W. W. CHARTERS,
Ohio State University.

The Major Strategy of Guidance¹

IT HAS become a verbal commonplace among leaders that vocational guidance is inextricably bound up with and partly dependent upon educational guidance, and that both educational and vocational guidance are in last analysis dependent upon the comprehensiveness, accuracy, and significance of the information that is secured on each pupil as a *growing* individual. It appears, however, that counsellors in their normal guidance practice do not have an adequate conception of, and are not making adequate efforts to bring about, the fundamental changes in our educational system which are prerequisite to securing and using that minimum amount and quality of information which is indispensable for immediate adjustment and long-term educational and vocational guidance.

The information which the counsellor now normally has regarding all but a very few of the children does not exceed the following items: (1) a group-test I.Q., and sometimes scores on one to four objective achievement tests; (2) the teachers' subjective grades in the courses which the student has "taken" to date; (3) sometimes the data on one or more questionnaires answered by the pupil and/or parents and/or teachers; (4) the counsellor's notes and impressions based on one to three brief interviews. The latter information is now normally available only for those few individuals that are referred to the counsellor as "problem cases." The I.Q. and objective test scores may have been secured from one day to a year or two prior to the first interview with the child; the teachers' marks are subjective and variable in meaning and standards, and give little or no indications regarding the growth of the child in any particular respect, or regarding the hierarchy of his interests and abilities; the weaknesses of questionnaires and sporadic interviews are too well known to need mention.

¹ Certain paragraphs from this paper were included in a joint article by F. S. Beers and the writer, in the April, 1934, issue of *Occupations*.

What is the minimum information prerequisite to hopeful guidance work and how may it be secured? The answer to the first will partially indicate the nature of the answer to the second of these questions.

The most adequate brief answer to the first question known to the writer is outlined in the cumulative educational record form published by the American Council on Education in the July, 1928, *Educational Record* Supplement. This form is arranged so as to give a compact, integrated, and sequential sketch of the educational history and extra-curricular life of the individual for a six-year period. Three such forms, used consecutively, will cover the elementary, secondary, and collegiate career of an individual. The record form, when filled out, presents a time-projection of the high points of the life of the individual for the period covered by the record. The most prominent feature of the form of this record is its vertical columns which, from left to right, represent successive calendar years, and which are subdivided by light lines into calendar quarters. In the left margin the rubrics or types of information are indicated, so that a given type of information is always found in a given line, and the date of the observation, measurement, or event is indicated by the column in which it is recorded. Thus it is possible to secure a bird's-eye view of the recorded life of the individual in any one year by reading all the material in the column for that year, or to follow the individual's development in any recorded aspect by reading all the entries in a given line from left to right. Essentially a graph, this form has been found very convenient both for recording and for organizing and interpreting information of many types and from various sources of information.

But, while the form of this record has positive values far greater than mere convenience and economy, it is the nature and extent of the information called for which is of paramount importance. This fact may be most conveniently apprehended by a study of the form itself, filled out for a *bona fide* case history, which is reproduced here, with a summary of accompanying discussion, from the *Educational Record* Supplement of July, 1928.

The Case of John Morton Smith, Jr. The facts concerning this boy were accidentally discovered in the records of a large city school which took exhaustive measures of its pupils but made no use of them because of the lack of an effective way to assemble and present them.

In 1927 John took college entrance examinations in five subjects with results indicated by the open circle in that column. He was refused admission because in English he ranked among the lowest 16 per cent, because the principal, supervisor, and mathematics teacher (all strangers to him) estimated his intelligence as below average, and because in a three-minute interview the college admissions officer could make nothing out of an excessively shy, self-conscious, and excitable lad.

The unused data in possession of the school when brought together in cumulative form tell a very different story; in fact they seem to indicate that the college officer who rejected this boy was actually dealing with a mind that should have been classed among the best 5 per cent of college risks. There are ten measures of John's intelligence as shown in the I.Q. graph beginning in 1922, none of them falling below the ninety-fourth percentile. There are four standard measurements in geography, three in American history, and one in economics—all above the ninety-seventh percentile. English fluctuates more widely but is nowhere below the eighty-fifth percentile, while of seven measures in French all but one are in the highest 2 per cent of modern language ability for the respective ages. The science line—general science, biology, physics, and chemistry—is lower but still well above the average. The four arithmetic measures are good, but the symbolic thinking required in algebra is indifferently done, and geometry is far down. Fearful of failure in the college examination in geometry, John's parents hired a tutor who had him commit to memory as many theorems as possible with the purely chance result there indicated. Drawing hovers about the average. A Stenquist test of mechanical ability shows poor success. Handwriting is very poor, thus doubtless explaining the low college entrance mark in English—the paper was illegible. Height and weight lines are much under average.

Desiring to enter college a year earlier, the boy learned Spanish by himself when fourteen. The school refused to admit him to the college examination, but his teacher gave him a standard American Council Spanish test in which he scored in the ninety-seventh percentile for third-year students. The rating in oral Spanish at the same time was, of course, low.

In extra-curricular activities the scattered obtainable facts about this boy make an impressive showing when they are pieced together. When twelve years old he brought to his English teacher an essay on "Shakespeare in Politics" highly documented from nearly every one of Shakespeare's plays. The following summer, having studied French for two years, he read by himself certain editions of four French authors and took the French teacher's examination thereon. Later he translated three short French comedies into English, and in his last year presented a lengthy study of geography that he had made from his French readings. Such work as this apparently earned him the maximum rating for "initiative" at the bottom of the card, although his first rating in that trait is the minimum because it was given by those in charge of group activities which he disliked. His "personality" rating is uniformly low. A psychiatrist rated him in 1923 as markedly introverted. His athletic activities include a little baseball (B), football (F), and tennis (Ten.) in early years, but after the age of thirteen these group sports give place to solitary hiking (H) with a book. Similarly, dramatics (Dr.) and debating (Deb.) give way to what is called "journalism" (J), which, however, was discovered to consist entirely of reviewing learned books for the local paper. His success at his summer jobs is good, his ambitions and interests are steady and consistent.

Studied as a whole, this record gives indubitable indications of a mentality that may be close to genius. The separate items taken alone count for little: but the sweep of evidence across even six years of this boy's life is unmistakable and should place the subject among those whom an institution handles with the utmost care. It is doubtless an extreme instance, but, if a case so obvious as this can be so badly bungled

in our administrative procedure, it seems likely that the average child must be a frequent sufferer.

As a chart for admission and guidance in collegiate and higher education, a true analysis of this kind in the case of any individual would be incomparably better than anything that we at present possess. We now make the most important decisions affecting a child's welfare in school and college with almost no pertinent information. A record of this sort could be gradually compiled from year to year with no greater effort than is now bestowed on unused and in many cases thoroughly useless records. It would supply our lack of information and would enable us to place a pupil or student more accurately and to advise him to his advantage.

This case history partially illustrates the character and extent of the information concerning an individual which the American Council Committee on Personnel Procedures considers as the minimum on which constructive immediate or long-term guidance may be safely based. It does not adequately illustrate one type of information which the committee urged as necessary in its original report (*Educational Record Supplement*, July, 1928, pp. 53-64), namely, the description of the individual's conduct and personality by means of frequent brief reports from the teachers giving anecdotes and concrete observations on the activities, interests, attitudes, and personal development of the pupil. Indeed, it is apparent from this record that the school probably neglected its major opportunity for constructive service to this pupil, namely, that of guiding his personal and social development.

The school took care of the academic interests and abilities not only of this student, and others equally gifted, but also of the needs of non-academic types of pupils; but the emphasis throughout the school, for all types of pupils, was on subject matter or vocational mastery commensurate with the abilities and aptitudes of the pupils as individuals. The school was enabled to make such adjustments largely because of the data from its admirably comprehensive testing program. The school deserves hearty congratulations for performing this indispensable service of academic adjustment, but it deserves

even greater commendation for having inaugurated in more recent years an almost equally extensive and effective service for the more difficult task of caring for the personal development and social adjustment of its pupils.

When John was in this school, the guidance service did not extend beyond academic adjustment. John entered the school a shy youngster, and emerged even more shy—indeed, almost a pathologically retiring introvert. The school itself made no effort to build up the boy's self-confidence, nor did it seek to correct the home conditions which obviously aggravated his shyness. It is gratifying to record the fact that this school is now definitely committed to the theory that its highest duty and privilege is not to teach subject matters, but to help develop individual boys and girls of all types into better and happier citizens.

The present attitude of the officers and teachers in this school toward the various types of data is an interesting and instructive one. Prior to 1929 their guidance activities were, as already indicated, largely confined to the academic field, and were based upon the results of approximately comparable tests given once or twice each year in most of the secondary school subject matters. While recognizing the limitations of objective tests, they used their indications, in combination with other evidences of academic achievement, with considerable confidence and success, especially when the results of three or four sets of semi-annual testing programs had become available for a given pupil.

At the present time these teachers are giving much more time to observing pupils' conduct, recording these concrete observations in the form of anecdotes, and collating and interpreting them periodically, than they formerly gave to testing and examining their pupils. Although the writing of anecdotes was at first regarded as both impossible and of doubtful value in guidance work, the great majority of the teachers are now enthusiastic about this aspect of their work, and regard it as an indispensable element in both their current teaching work and in their long-term guidance work, which now involves the

formulation and progressive modification of individual goals—personal and social, as well as academic.

But this does not mean any loss of confidence in, or lessened use of, comparable achievement tests. On the contrary, the teachers regard the cumulative test data not only as indispensable for academic guidance, but as a necessary basis for personal guidance. They report that many maladjustments, some quite serious in nature, originate in and are aggravated by academic maladjustments, the detection and correction of which would in most cases be very unlikely in the absence of cumulative data from comparable tests. Indeed, these teachers received their original impetus to the personal type of guidance which now happily dominates the school about equally from the marginal indications arising from their use of the test data in academic guidance, and from the cumulative record form and accompanying recommendations published by the American Council on Education in 1928.

In this school there was never any conflict between the use of tests and constructive guidance, nor is there any now. Tests have been regarded as fallible but helpful instruments, especially when used systematically and recorded in comparable units year after year. They have never been regarded as antagonistic to curriculum reform; on the contrary, they have enabled the school to adjust the school work to the abilities and interests of individual pupils to such an extent that in this school "there are almost as many curricula as there are pupils." The teachers are unanimous in the opinion that there is more creative work, more independent thinking, and more genuine interest in and enthusiasm for learning since the introduction of systematic testing than ever before. The liberal policy of curriculum adjustment does not in this school mean lessening of control of pupils by the teachers, or the disintegration of discipline, intellectual or moral; it means making school control of pupils more intelligent and effective; and it means more natural discipline which grows from within rather than depending on external persuasion.

In this relation, it is only fair to say that this school is

blessed with an unusually gifted and humane faculty, and that other schools have suffered from misunderstanding and fictitious conflicts regarding guidance, testing work, curriculum making, and improvement of teaching, from which this school has been saved by the genius of its principal and teachers. Much of the misunderstanding regarding objective and comparable tests is a direct inheritance from the customary misuse of the old type examinations, which in practice were largely flunking and passing devices, used to separate the sheep from the goats, but serving no really constructive purpose for either group.

The misunderstanding of the philosophy, technology, and methodology of the American Council cumulative record form in some schools—fortunately few in number—emphasizes the point suggested above that the first and most difficult task of the guidance movement is to make itself understood by the mass of teachers, and to demonstrate the compatibility of its philosophy and methodology with the highest ideals of education—intellectual, moral, and physical. In spite of the fact that about three-fourths of the space on the American Council cumulative record form was allotted to the personal, social, and extra-curricular history of the individual, and less than one-fourth to the results of all kinds of academic measurements, many wise and judicious school authorities have taken it for granted that the American Council was merely urging the use of tests. Many equally wise school authorities apparently take the pessimistic view that teachers cannot learn to use test results constructively, but will inevitably use them merely as additional guides to unethical coaching activities and other unprofessional conduct. At least one critic of systematic testing and guidance programs has said that teachers are and always will be subservient slaves to the testing program, regardless of whatever guidance they may receive in the proper constructive uses of test data. The experience of an increasing number of schools of all types, including many of our outstanding progressive schools, indicates that these pessimistic views are an unwarranted reflection on the intelli-

gence and integrity of our teachers, on our teacher-training institutions, and on current educational leadership.

How Secure and Use Guidance Information? As suggested above, the answer made in preceding pages to the first question has indicated the nature of the answer to the second question, given here as a paragraph heading. It is now clear, if the preceding answers have any validity at all, that guidance information can neither be secured nor used by any such fifth-wheel gestures as those upon which we have depended in the past. Nothing less than basic changes in the fundamental philosophy and administration of our schools, and nothing less than a complete reorientation of our teachers regarding the hierarchy of their duties, will suffice to realize the ideals of educational and vocational guidance. The basic changes required are clearly implied in the justly famous statement of Professor Morrison to the effect that teachers should spend half their time studying their pupils as growing individuals, and the rest of their time doing what that study indicates is desirable and necessary.

The type of fundamental reorganization and reorientation here advocated may be illustrated from the recent history of Mechanics Institute in Rochester, N. Y. Under the leadership of President Randall, and with the consulting and advisory aid of Dr. Charters and Dr. Tyler, the faculty has been transformed from a group of teachers of subject matter into a group of leaders of youth. Their leadership is based on a continuing study of their pupils as individuals who have personal and social as well as academic and vocational problems. These teachers use all available sources of information about pupils, including intelligence, aptitude, interest, and achievement tests; but the source which they have exploited more fully than in any other school of my acquaintance, and the one to which I wish to call your particular attention, is the Personal Anecdote. The use made of the anecdote at Mechanics Institute is what I shall venture to call the anecdotal method of personal analysis.

The essential nature of the anecdotal method of personal

analysis consists of at least four important procedures which must be carefully distinguished.

1. *Observing Conduct.* The first of these procedures is the persistent and continuing observation of the conduct of the pupil, in and out of the classroom, by all the teachers and school officers who regularly or occasionally come into contact with him.

2. *Recording Observations.* The second procedure is that of making a record of each significant observation in terms that are as concrete and objective as possible, and the filing of these records in some convenient manner so that they may be systematically assembled and studied in the central office. The qualification that each observation should be "significant" is inescapable and implies that the success of the anecdotal method, like the success of teaching, depends in last analysis upon the intelligence, training, and judgment of the teachers. In practice the danger is not that the files will be filled with voluminous but useless anecdotes, but that the teachers will record too few of their observations because they cannot always recognize their significance at the time, or recall them later when their contribution to the growing picture of the growing pupil would be easily detected. The general rule for this part of the procedure is that teachers should record *every* instance of conduct which attracts their attention, favorably or unfavorably, or which seems to them characteristic of the pupil. Teachers must be constantly reminded of the fact that an observation which is not recorded is usually irretrievably lost. A helpful rule in inducting teachers into this method of personal analysis is that each teacher should record at least one anecdote on each pupil each week. The observations may run over the whole gamut of conduct, from performance in class work, manners in the classroom, in the cafeteria, and on the athletic field, to personal appearance, style of clothing, and excessive use of cosmetics. The supreme objective in this part of the procedure is fidelity to the conduct concretely observed, and the avoidance of concealing the observed conduct under meaningless inferences. Inferences and general judgments are valid if based on an adequate sampling of con-

duct, but are rarely valid, or even meaningful, if based on a single observation, or on a succession of observations of a single observer. For long-term guidance purposes an intelligible record of the basis of an inference is vastly more helpful than the inference itself.²

Consider, for example, the ambiguities of the rating "undependable" which a teacher gave to three pupils who went on a picnic instead of keeping a Friday afternoon appointment with her. The facts as later recorded by the supervisor were as follows:

Pupil A, after unsuccessfully trying to cancel the appointment by telephone, arrived 15 minutes late, found teacher gone, and then rejoined the picnickers.

Pupil B, failing in efforts to cancel appointment by telephone, went to picnic, and apologized to teacher Monday morning.

Pupil C went on picnic Friday afternoon, making no effort to cancel appointment. On Monday morning, told teacher severe headache had prevented keeping appointment Friday afternoon.

3. *Periodical Analysis and Interpretation of Anecdotes.* The third procedure is that in which the anecdotes from all teachers and observers for a considerable period of time are analyzed and provisionally interpreted. It is this phase of the anecdotal method which differs most strikingly from the traditional rating scale method of personality analysis. In using the older rating scales, the rater was asked to make judgments at a particular time regarding a pupil's relative standing on more or less general and abstract qualities. Under normal conditions, the rater has no basis for judgment save general impressions and whatever bits of observed conduct can be remembered at the moment. In other words, you have only the result of a fallible judgment based on very meager observations. When ratings of several raters are averaged, the result in some cases is but a mixture of incom-

² See *Educational Record* Supplement, July, 1928, pp. 53-64. President Robertson's scholarly summary of the studies of the sub-committee on Personality Ratings was in a large measure the foundation on which the Mechanics Institute anecdotal method was built.

measurables, and is often only but a little more reliable or meaningful than any one rater's judgment.

In the anecdotal method, on the other hand, the teachers and observers are not asked to make inferences or judgments individually, but to make records of concrete conduct which they have observed. These concrete observations are all pooled and analyzed, and their indications are investigated and discussed before any inferences or interpretations are attempted. Judgments resulting from this procedure are much more likely to be reliable and meaningful than are the statistical averages of the same number of ratings by judges who arrive at their ratings independently, without discussion, and with no knowledge of the pupils except their own individual observations. In the anecdotal method the teachers are not mere gatherers of anecdotes: their powers of interpretation and judgment are used, but in a more effective way, because their judgments are based on *all* the recorded observations of *all* the teachers, plus their own unrecorded impressions. The sharp separation of the process of gathering evidence from the process of interpreting that evidence, the basing of the interpretations and judgments on *all* the evidence collected by many observers over a considerable period of time, and the constant availability of the recorded evidence for revising interpretations and detecting trends of development, are the essential features of the anecdotal method of personality analysis.³

4. *Remedial Treatment.* Perhaps the greatest advantage of the anecdotal method is its greater usefulness in the prac-

³ Space limitations alone account for the absence of any comment in this paper on the "descriptive type" method of indicating and recording judgments, which was devised by Dr. E. R. Smith and the Committee on Records and Reports of the Progressive Education Association, and which is being tried out in some of the schools participating in the Progressive Education Association eight-year experiment. Suffice it to say here that there is no conflict between the "descriptive type" and the anecdotal methods; on the contrary, the latter is the ideal foundation for the former. Dr. Smith's method is designed to afford many of the values of the anecdotal method as far as is possible without actually collecting the anecdotes, and promises much in the direction of releasing us from the vagueness of the older rating scales on abstract qualities. Information concerning the "descriptive type" method may be secured from Dr. E. R. Smith, Beaver Country Day School, Chestnut Hill, Massachusetts.

tical work of helping young people to become better and happier citizens. This advantage derives mainly from the fact that it deals primarily with concrete conduct, and that in the interpretive⁴ procedure, *judgment* and *rating* of the pupil on abstract general qualities is naturally and almost inevitably subordinated to comprehensive and unbiased *description* in terms of concrete conduct and trends of development. Favorable features and desirable trends are just as specifically recorded as unfavorable features, and the fact that the favorable features are known to all the teachers frequently gives the teachers a constructive attitude and approach to individual problems that would otherwise be difficult or impossible. If teachers only know that Pupil A is "rated" very low in honesty and truthfulness, there is usually very little that can be done about it; but if they know that his lies are confined to inventing imaginative excuses for tardiness, and his dishonesty to "losing" library books, there is neither cause for very serious concern, nor lack of promising ways in which to approach the pupil with a view to developing better habits.

The most effective way for gaining an understanding of how the anecdotal method works in practice is to visit the Mechanics Institute. In the brief time at my disposal I cannot present here the full anecdotal record of even one pupil who has graduated at Mechanics Institute. I shall, however, read a few selected excerpts from one pupil's record, to illustrate the character of the anecdotes and the use that was made of them. In considering this illustration, the reader must bear in mind that it is taken from the earliest efforts at Mechanics Institute to develop the anecdotal method, and that even so it does not fairly represent either the method or the Institute, because some of the most interesting and representative cases in the files could not be presented within the limitations of this paper. Some of the anecdotes include inferences as well as concrete observations.

Illustrative anecdotes: Student B.

Background Record. Home: Father in coal business;

⁴In this respect the anecdotal method approaches the "descriptive type" method of Dr. Smith's committee, mentioned in the preceding footnote.

mother at home and ill; big family of brothers and sisters; brought up in coal town—under 10,000 population. Education: High school graduate plus one year night school in college in town where she worked; best work in mathematics, English, and history; excellent high school record. Extra-curricular activities in high school: Dramatics, basket ball, tennis, sketching, writing, Epworth League. Experience (at entrance): One year selling, one year clerical work. References (at entrance): Outstandingly favorable in all respects. Age (at entrance): 20.

Classification Examinations (at entrance): Local percentile ratings were: Army Alpha, 72; A-S Reaction, 96; Mathematics, 75; Reading Speed, 44; Reading Accuracy, 87.

Scholastic Record (at graduation): All finals honor grades except for one normal grade. Cooperative Job (record at graduation): Consistently excellent reports. Extra-curricular activities (at graduation): President of class and editor of school paper.

Comments on First Year (Prior to initiation of anecdotal method): From supervisor: She made very poor first impression because of extreme and shabby attire and vivid make-up. She talked well, however, and showed keen interest. Faculty Summary: H—Honor; D—Diploma; L—Letter.

| | <i>February</i> | <i>June</i> |
|------------------------|-----------------|-------------|
| Dependability | D | H |
| Initiative | D | H |
| Friendliness | D | D |
| Drive | D | H |
| Thinking ability | H | D |

This is all the information available on Student B at the end of her first year in Mechanics Institute. The anecdotal method was introduced at the beginning of her second year. The following excerpts are only a few of the dozens of illuminating observations recorded during Student B's second year.

| <i>Date</i> | <i>Observer</i> | <i>Anecdote Record</i> |
|-------------|-----------------|------------------------------------------------------------------------------------------------------------------|
| Sept. | Supervisor | Her stunt in the Retailing party was highly original. She is apparently unpopular with members of her own group. |
| Sept. | Teacher 5 | Many mannerisms and not very tactful. |

| | | |
|-------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sept. | Teacher 7 | Brings in illustrations of the applications to the job of the principles learned. Completes assignments on time or ahead of time. Does more than is required both in reference reading and in problems. |
| Nov. | Teacher 9 | Monopolizes group discussions. |
| Dec. | Teacher 8 | She tells me that students do not like her. I have tried to explain what I think in her manner antagonizes but I don't get it across as I have similar characteristics. |
| Jan. | Supervisor | The report from the store about the work was fine. Asked for an interview to talk over way of correcting appearance of artificiality. |
| Jan. | Teacher 7 | On the store trip to select merchandise for the display window she took the lead (in a group of three students) in making requests in each department, in making selections, and in signing for merchandise borrowed. In the actual arrangement of the display windows she stood back in order that other students in the group might have some of the experience in doing this project. |
| March | Teacher 7 | Came to me for additional advice on overcoming characteristics which make students dislike her. She took a difficult assignment in color and design which involved doing a costume analysis and prescription for a class mate who seemed antagonistic to her. She is doing a good job of it. |
| April | Teacher 7 | She gives other students opportunity to discuss and to work out their share of group assignments. |
| May | Teacher 7 | She has been able to make students understand that she is not so much self-centered as ambitious. She has gained their cooperation and confidence. |
| May | Teacher 8 | In the sorority, has become the person (next to the president) to whom people turn for suggestions, assistance, and leadership. This is true of those who at first resented her. |

The supervisors' composite summary of the second year's behavior record is as follows: Ambitious, sincere, enthusiastic; high ideals; keen, active mind; recognizes limitations and works on them; high strung emotionally, but does not fly

off at a tangent; sensitive; keen initiative in class discussion; is learning not to monopolize the conversation; has clever ideas which she can execute; has worn down antagonism of classmates by skilful attack on the problem but with no lowering of ideals or quality; unfortunate mannerisms suggest too easy familiarity; needs more quiet dignity; shows care and improving judgment in her efforts; willing to cooperate in every way; applies her studies with unusual skill; has won a real victory in showing that she is not self-centered and that she is fully cooperative; works with unstinted effort; employment record fine.

The third year behavior record includes the following anecdotes:

| <i>Date</i> | <i>Observer</i> | <i>Anecdote Record</i> |
|-------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oct. | Teacher 1 | Has completely conquered her habit of answering every question. She has an answer ready for every question but never volunteers it until others have had a chance. |
| Nov. | Supervisor | Came to my house (without previous arrangement); after discussing an assignment, told me that one of the girls had been talking very unpleasantly about her to the other girls. After a long discussion of the problem she agreed to laugh at it, realizing how ridiculous the accusations were. Her attitude when she left seemed healthy and promising. |
| March | Supervisor | Discussed with me her personal problems, including antagonisms which she arouses and her over-dramatic tendencies. Warned her to watch to avoid impression of artificiality and insincerity; to just tell her story, not to act it. |

The supervisors' composite summary of Student B's anecdotal record for her third and final year in Mechanics Institute is as follows: Very cooperative; prepares work consistently and conscientiously; work of steady, superior quality, both in classes and on the job; thinks quickly and deeply; active in discussion; ambitious to get all she can from her work; improving in tact and ease in getting along with people; very practical point of view, sometimes even hard; original and interested in new ideas.

Student B's present job, one year after graduation, is that of assistant to a responsible executive in a large organization. Her work involves responsibilities in several parts of the chain system. She is making a marked success of her work and is well liked.

In reviewing these excerpts from this student's 30-page file of anecdotes, Dr. R. W. Tyler makes the following significant comments:

"Here is a student whose academic ability and scholarship is excellent. Ordinarily, schools would not concern themselves with giving her any particular guidance. Yet her records show that she is hampered greatly in her effectiveness and her happiness by her inability to develop cordial relations with her fellow students. These few quotations from the record merely indicate what is more clearly depicted in the record as a whole. This record, representing as it does the observations of several instructors over a period of time, gives a more accurate picture of this student's problem than any isolated impression of individual instructors. The value of this record in diagnosis is made clear when contrasted with the attempt to rate the student's traits, where each rater attempts to infer traits from a limited segment of experience with the student.

"The continuing record provides opportunity to check and revise the constructive efforts applied to help this student in overcoming her difficulties and to determine their efficacy. The increased effectiveness and happiness of the student, as a result of the long-continued and carefully checked remedial treatment, is clearly suggested by the record."

Another case which illustrates the kind of personal guidance and assistance facilitated by the anecdotal method is that of Student K. In September, 1932, this student entered Mechanics Institute in the Retailing Department. He was 18 years of age and his ranking on the intelligence test fell at the 72nd percentile. All of the information concerning his background was favorable and he had made an acceptable record in his high school work, but had never shown any initiative in either curricular or extra-curricular activities. Upon entrance at the Institute his instructors began making records concerning his behavior of which the following are typical:

- September 30 Hasn't volunteered or recited in class in the first two weeks.
His notebook work was unusually fine. He had some clippings that were not required, but he has not as yet recited in class.
- October 15 Called upon him to discuss a topic but he just sat, making no response at all.
Had an unusual test paper—all of the problems well handled.
- November 1 Met him in the hall and he didn't speak to me although I spoke to him.
Never makes a recitation.
- December 3 Missed class three days just prior to Thanksgiving because he had a chance to work. He did not make arrangements in advance concerning this and he was removed from the list of candidates. He seemed heart-broken about this, but had very little comment to make. (March 1—Reinstated because of regularity in attendance.)
- January 10 Attended technical society meeting last night, but did not join the discussion afterwards.
Never recites in class.

These items taken from the anecdote record indicate a serious personality defect which isolated him from the group. He was almost pathologically shy and reserved, but very capable. The correction of this defect was obviously important for K's future effectiveness and happiness; but in most schools the defect would have been largely ignored and perhaps aggravated. When the supervisor called this boy into the office for a conference on his personal problems there were many fine things for which he could be commended. He was industrious and did good work. He was modest. His work was usually turned in on time, but the supervisor pointed out he was not making himself personally effective with the instructors and the other members of his class by making contributions to the group discussions. The boy admitted that he was very bashful and hesitant about talking in front of groups; that he always had a sinking sensation in the pit of his stomach when he tried to volunteer or speak in front of the group. He recognized clearly the need for more active participation and said that in some cases he missed material because he was

afraid to ask about it. He also expressed the fact that any contact with people was difficult.

The supervisor asked K to make a chart showing every class which he attended, but instead of writing in the names of the classes the squares were left blank. Armed with this document he was asked to make a check-mark in each square for each time that he volunteered in class discussion, and for the first week he was to make a big effort to volunteer at least once in each class. This was made easier by requesting that he prepare especially well some of the topics in each class and when discussions centered on these topics he was to volunteer the additional information which he had worked out. He expressed a good deal of enthusiasm for this kind of procedure, but at the end of the first week his record showed an average of only one recitation for each four class periods. He was praised heartily for this effort by the supervisor and started out the next week with another chart and during that week he brought his average up to one recitation a period. This program was carried out for fifteen weeks and at the end of that time the following anecdotes are recorded concerning his case:

April 11 He made a special report today before the class and did a very excellent job. His thinking was clear and his outline was well prepared. He gave the report with zest and vigor. He is one of the active leaders in group discussion and seems to especially enjoy this part of the work.

At the expiration of fifteen weeks, the supervisor and the boy agreed that it was no longer necessary to keep a chart but that he would make monthly reports to the supervisor concerning his progress.

This is the Mechanics Institute history of a fine student who would have gone through the traditional institution suffering from the feeling that he was incapable of doing satisfactory classroom work and afraid to make suitable contacts with people. He was capable of doing normal work, but was handicapped by a remediable personality defect which was quickly revealed by the anecdote record and which was effectively corrected by the collaboration of teachers who are leaders of youth as well as teachers of subject matter, and

who realize that the continuing study of growing boys and girls is an indispensable obligation and privilege of all educators.

The question naturally arises: Is the anecdotal method generally feasible? Can teachers learn to use it effectively? Is the cost within available financial resources? The answer is in the affirmative for all these questions. In Mechanics Institute the teachers have learned to use the anecdotal method effectively, and have obviously increased the school's service to its pupils without increasing the budget. Not only have these teachers learned to use the anecdotal method effectively, but they have learned its use makes their work more enjoyable and satisfying.⁵

The suggestion which I derive from the experience at Mechanics Institute, and from my observations in other schools, is that teachers can and must cease to be primarily subject matter protagonists and become primarily highly adaptable leaders of the individual children that make up their heterogeneous classes. The emphasis must shift from teaching by teachers to learning by pupils; and in this learning by pupils the emphasis must shift from prescribed curriculum courses and pre-determined subject content to materials and experiences that are appropriate to the interests and life needs of individuals in society. Unless and until the teachers do accept Professor Morrison's sage epigram, both vocational and educational guidance will remain largely the ineffective fifth wheel gesture which, in spite of brilliant exceptions, they have been to date. After several decades of guidance by "guidance officers" it has become clear that guidance cannot be really effective until it is integrated with the normal school routine and is assimilated as one of the most important of the normal functions of the regular teaching staff.

More numerous and more adequately trained guidance

⁵ Space limitations alone account for the absence in this paper of reference to the interesting trait analysis method devised by the Progressive Education Association Committee on Records and Reports, under the leadership of Dr. E. R. Smith, Beaver Country Day School, Chestnut Hill, Massachusetts. Those who find the anecdotal method described above of particular interest are invited to read *in toto* the article by President D. A. Robertson in the *Educational Record* Supplement of July, 1928, pp. 53-64.

officers are, to be sure, necessary and indispensable; but their potentialities will remain largely ineffective without the intelligent, heartily sympathetic, and active cooperation of at least a majority of the regular teaching staff.

From the viewpoint of both society and the individual, it is obviously more important what kind of a citizen a pupil becomes than what prescribed "courses" he "passes." Guidance is not merely a technique but a philosophy which must fundamentally permeate every aspect of school life if it is to realize any significant part of its potential contribution to civilization. We have in the past emphasized "the objectives of the school," and have tried to attain them by making mass prescriptions called curricula and standards, and by enforcing them with all the direct and indirect means of coercion available to the schools "within the law." The traditional defense for the prescriptive curriculum is that "children must be socialized." There are certainly many elements common to the abilities, interests and needs of most if not all our children; but this defense has never made it clear just how prescribed courses which regularly "flunk" from 10 to 40 per cent of the pupils "socialize" them, particularly when the great majority of those who "pass" the courses rarely have occasion to use their gleanings from such courses in later life. There is considerable evidence that either flunking students or successfully stuffing them with useless materials (and their alleged "disciplines") tends to make many pupils anti-social in attitude if not in deed, especially when their personal and social problems are neglected in the usual manner. During the last decade it has become increasingly apparent to thoughtful people that, however convenient prescriptive curricula may be to educational administrators (who too frequently assume that "good order" is synonymous with mere uniformity or conformity), the mere inclusion of a "course" in a curriculum is not an adequate justification for asking *all* individual pupils in the school to "take" that course, or to live up to its largely accidental local standards.

Experience has shown that many of the prescribed courses are beyond the intellectual capacity of large fractions of the

school population, alien to the interests of a larger fraction, and irrelevant to the life needs of a still larger fraction. Candor compels us to observe that, however valuable (not to say glorious) some subject matters have been and will continue to be to *some* pupils, it is only too obvious that it would never have occurred to anyone to make some such subjects *universal* requirements except for the anti-social aspects of departmental loyalties, and that such incongruities could not have survived as long as they have except for administrative and social inertia and highly organized academic log-rolling. The point to note here is that constructive and comprehensive guidance is now practically estopped by academic log-rolling, and cannot enjoy full development until the prescriptive curriculum and its arbitrary culture patterns are swept aside both in practice and intent. Guidance leaders and practitioners, like workers in the measurement movement, have been too exclusively absorbed in the technical minutiae of their craft, and have neglected the major strategy, if not the general philosophy, of their profession. Guidance is too much concerned with the very taproot of education to be able to make substantial progress on its technical advances alone. The guidance movement, again like the measurement movement, not only needs perspective itself, but needs to develop that perspective in the administrators and curriculum-makers who dominate our schools, and in the rank and file of teachers who are almost as much victims of inadequate leadership as are the pupils and taxpayers. Not only must the administrators be induced to extirpate unconstructive rules, but the teachers must be induced to place the welfare of the pupil above departmental loyalty. The "objectives of the school" have no defense or validity except as they are compatible with the capacities, interests, and needs of the individual in society. No one has definitely shown that any one of the present required courses is really essential or surely helpful to good citizenship in *all* types of pupils.

The substance of the preceding paragraph is mordantly illustrated by the experience of one college guidance officer who, after an extended study of a student, formulated a pro-

gram which was accepted by the student, but which omitted two courses "required" for the degree. All college officers concerned agreed that this program was better for the student than the "required" program, but the departmental representatives refused to allow the omission of their courses, on the ground that faculty legislation made their "disciplines" essential for the degree. When the matter was referred to the Dean, he summarized by saying to the student: "If you want an education you should take the program you have outlined; if you want a degree you must take these required courses, which are admittedly irrelevant to your purposes: but you cannot get both an education and a degree from this college." Since the degree was prerequisite to entrance to the professional school which the pupil planned to enter, the guidance officer's work went for naught, and the student's record showed C-course grades for 12 "points" although his grades in the other 116 points required for the degree were in no case lower than B+.

To repeat, guidance cannot realize its full potentialities until (1) a greater share of the educational budget is allotted to its functions, and (2) a majority of administrators and teachers genuinely accept, with both mind and heart, the theory that the welfare of the individual pupil in society is paramount to both departmental loyalty and curricular pattern. These two changes cannot be made by purely technical advances. The guidance leaders must turn their attention to the philosophy, administration, finance, teacher-training, and curriculum-making forces in our schools, as well as continue their work of technical research and self-education. Self-education is essential, but insufficient. It is only too obvious that constructive, systematic long-term guidance cannot become a reality unless active and hearty cooperation of the majority of school officers and teachers replaces their present attitude, which is frequently one of active opposition, and almost never better than indifferent tolerance based on lack of understanding. In other words, one of the indispensable prerequisites to the realization of guidance potentialities is to convert Professor Morrison's exhortation into a description: Teachers

(should) spend half their time studying their pupils as individuals, and the rest of their time doing what that study shows to be desirable and necessary.

This reorientation of teachers and school officers cannot be done by the teacher-training institutions alone, for at least two reasons. First, the majority of these institutions are themselves apparently committed to the prescriptive curriculum as an administrative and financial necessity, if not to a disciplinary and compulsive theory of education. Second, only a fraction of the teachers in service (now and for some years to come) expose themselves to the direct influence of the teacher-training institutions. The immediate need, therefore, is the double one of discovering some effective way of reorienting teachers in service, and of giving guidance a sound philosophical, administrative, and financial foundation in our teacher training institutions. To be effective, guidance must become, at least in its fundamental philosophy and broad administrative implications, the corner-stone of the professional education of teachers, rather than a technical specialty to which only a small fraction of teachers-in-training (prospective advisers, deans-of-students, etc.) are normally exposed.

If the doctrine that publicly supported institutions were established and are maintained for the benefit of *all* the children of *all* the people is accepted, it is obvious that there is no logical defense for curricula and administrative policies and school procedures that regularly result in the official "failure" of 10 to 40 per cent of our children. Curricula are still being formulated by committees whose members know in advance that they will be "failed" by large fractions of the school population; these curricula are being prescribed by superintendents and "taught" by teachers who share the knowledge of the curriculum committees. The taxpayers are beginning to see that foredooming pupils to failure is not tending to "socialize" them; they are beginning to realize that the obligation of the schools to meet the needs of the "failing quarter" of the school population is just as great as their obligation to provide a curriculum which can be "passed" by the "upper three-quarters." The schools can no longer be run for the

convenience of administrative routine, or in accordance with the *ex cathedra* dispensations of curriculum committees which still are continuing to emit uniform prescriptions for heterogeneous masses of children.

There is no way of meeting the needs of individual pupils without first ascertaining what those needs are. Thus curriculum making and individual guidance are inseparable. Broad curriculum outlines and descriptions of desirable objectives have a value, not as specific goals to be sought by or for *all* pupils, nor as standards to be enforced at all costs, but as *general* guides for the ultimate curriculum-maker—the teacher who comes into actual contact with the individual pupil. In the ideal school, curriculum-making will become a process of formulating individual goals, and progressively modifying them in accordance with the developing capacities, interests, and needs of individual pupils. This process will be a continuous cycle of (1) learning the capacities, interests, and needs of the individual pupil, (2) setting up provisional goals, (3) getting the student to accept those goals at least provisionally, (4) helping the student to attain those goals by teaching when necessary, or by refraining from teaching whenever possible, (5) studying the progress made, with a readiness to modify the goals if necessary. This process is needed now and will be more crucially needed in the future, because children are staying in school longer and longer, with the result that the variability of interests and needs of individuals in our school population is increasing. An indispensable instrumentality for this process is the cumulative record of comparable measures, personal and social data, and teachers' observations, such as that recommended by the American Council on Education.

This process does not mean a surrender to the laziness or irresponsible whims of pupils. The purpose is not to decrease the control of the child by the school, but rather to make that control more intelligent and more effective. When teachers waste less time on teaching and "class-keeping" rituals which are admittedly futile for large fractions of our school population, when they give more time to studying children as in-

dividuals, in the light of comprehensive cumulative records that are systematically kept up-to-date, there is every reason for believing that school control will be both more effective and more constructive. When children begin to realize that their teachers are not merely policemen whose paramount duty is to "put over" prescribed courses which are irrelevant, or to enforce standards which are impossible, but are devoted to helping them become better and happier citizens by meeting their needs whatever their needs happen to be, there will be fewer temptations for children to develop protective coloring in the form of the many anti-social and negative attitudes and habits which now too frequently constitute the chief contribution of the school to some of our children. Unless the guidance and measurement movements help to bring about this change in the attitudes of both teachers and pupils, both movements will have failed in their first opportunity and basic obligation to society.

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Conference on Emotion

WHAT consideration shall be given to emotion in the educative process? Is it the business of education to eliminate, to develop, or to control emotion? Is the environment set up by the school adapted to the most wholesome emotional growth, or does a race, bred in the scholastic cultural medium, eventually yield to a race bred in a culture offering sounder emotional development? Do knowledge and desire grow *pari passu*, or in inverse ratio? Has education, as such, any concern with the direction and strength of desire at the completion of the educational regime or only with the knowledge and skills attained? Does the emotional development of youth belong to some other agent of society than the school—the radio, the movie, the drama, the black or brown shirt, the family, the church? If so, how shall the time of youth be allotted as between these agencies? If nursery schools educate the whole child and universities concern themselves only with the creation and sharing of knowledge, does the individual or society as organized outside the university system come to assume provision for the cultural medium in which the emotional life is to live, and at what stages of the process, and in what proportions? Is a supreme desire or dominant loyalty essential to the unity and healthy functioning of a planned civilization? If so, whence is it to be derived? Shall it be the greatest common divisor of humanity's emotional life determined on the democratic principle—the desire shared by the greatest number—or in what soil is the hierarchy of loyalties rooted?

These questions, and others even more searching, spring up throughout the educational world as soon as one says, as the Superintendent of the great New York City school system said the other day, "We teach the child, not subjects." Subjects, even the most abstruse, are simple things compared to children. We can define, and accordingly exclude as we will, when we deal with subjects, but it is not so easy when we deal with living organisms. A civilization can go along for fifty

or a hundred years acting on its definition "man is mind," ordering the school system accordingly; but a world war, or a revolution, a crusade of fools, or an incursion of Goths, an increasing cult of nationalism, will suddenly make it plain to the blindest that the definition is only a definition and a poor one at that, because it pictures only one aspect of the reality. A university president may mark off the realm of knowledge as the sphere of the university and warn his staff to stay on the reservation, and then, finding the reservation too tame for himself, spend most of his time in that realm of human passions known as politics. When a group of our most intelligent youth were asked last winter what aspect of life they found themselves least prepared for by a liberal education, the common answer was, the strength and direction of desires in the average man and woman.

In the overhauling of accounts which has been taking place the last year or two the American people have discovered that the cost of schools is not being met out of the savings on jails, asylums, and almshouses, as Horace Mann promised, and they are asking in the simplest terms, is the product of the school good?

These questions as well as innate intellectual curiosity led the American Council on Education to set up an exploratory committee of seven on the Relation of Emotions to the Educative Process. Funds were provided by the Josiah Macy, Junior, Foundation, for a two-year study, and the committee organized with Professor Daniel A. Prescott of Rutgers University as chairman and Professor Frederick H. Lund of Temple University as secretary. A few months work was sufficient to make it evident that here was a vast field almost untouched by human exploration, with outcroppings of ore that would well repay intensive application. Accordingly, arrangements have been made for the chairman to secure leave of absence from his university for six months beginning in February, 1935, so that he may devote his entire time to formulating the report of the committee. In order, further, that the committee might have the help of experts in special portions of the field, a four-day conference was arranged through the

courtesy of Dr. Ludwig Kast and the Josiah Macy, Junior, Foundation, to be held at the Malvern Hotel, Bar Harbor, August 23-26, and sixteen specialists sat with six of the committee to canvass certain aspects of the problem more in detail.

The conference was divided into eight sessions, each session lasting from two and a half to three and a half hours. The first hour of each session was devoted to a presentation of the problem by a leader chosen in advance, this being followed by *general discussion in which the twenty-two members of the conference were all free to participate*. In this way the following topics were considered:

I. The Physiological Bases of Emotion. Dr. Walter B. Cannon, Harvard University, leader.

II. The Influence of Emotion upon Intellectual Processes—Learning, Reasoning, Imagining. Dr. F. L. Wells, Boston Psychopathic Hospital, leader.

III. The Emotional Orientations of Children and How They May Be Evaluated—Emotional Appetites, Enthusiasms and Purposes. Dr. George D. Stoddard, University of Iowa, leader.

IV. Emotion and Sex. Dr. L. K. Frank, General Education Board, leader.

V. Emotional Tensions and Personality Maladjustments in Children and Young People. What Is "Emotional Maturity?" Dr. David M. Levy, New York City, leader.

VI. The Emotional Climate of Schools as Influenced by the Interplay of Personalities. Dr. Mark May, Institute of Human Relations, Yale University, leader.

VII. The Emotional Climate of Schools as Influenced by the Nature of Educational Tasks and by School Practices. Dr. Laura Zirbes, Ohio State University, leader.

VIII. Emotion and Aesthetic Experience and Expression. Dr. Thomas Munro, Curator of Education of the Cleveland Art Museum and Head of the Department of Art, Western Reserve University, leader.

One of the first results of the conference was to make it evident that the term "emotion" had different meanings for different members of the group. To some the term should be reserved for the crude emotions—hate, fear, anger—emotions accompanied by or composed of visceral changes and re-

actions. To others "emotion" appears to be the only available term comprehensive enough to include all non-intellectual aspects of conscious life. Still others would not distinguish two or three categories—knowing, feeling, desire—but would regard emotional tone as an inseparable quality of all conscious life; not a separate road on the map but the varying color of the road map—the yellow, blue, red, of the one road at varying points. Desire, it was agreed, was one kind of emotion, but whether so feeble a desire as the intellectual interest of a college student was robust enough to be classified as emotion was questioned.

It was evident from the discussion that, while emotion is not a good term for the purpose, there is no better, and that unless the committee were willing to content itself with a negative term such as "non-intellectual"—or create a new term of its own—it could not do better than to continue to use "emotion" which, however unsatisfactory to physiologist, psychologist, and psychiatrist in its finer discriminations, would be, on the whole, not misleading to the man on the street.

The second fact that emerged was the exceeding poverty of our present knowledge of the physiology of emotion, even with a recognized expert like Dr. Cannon on hand to answer questions. It is indeed a slender base on which to build any scientific structure with educational implications. Evidently the teacher will continue to drive with sealed hood for years to come. Normal psychology should join its plea to that of abnormal psychology for greatly increased research and experimentation in this field. The thalamic region as the center of physiological change in emotion and the cortex as the center of control, both to repress and to stimulate, are identified, but relatively little is known of their mutual interaction.

Dr. Wells discussed especially the emotion-producing situation, pointing out that emotion is a function of personality adjustment in terms of either frustration or of opportunity, but more generally of frustration. He emphasized the fact that emotions must be studied in reference to situations rather than in reference to single stimuli. The emotion-producing situation is accompanied by certain phenomena in both the

intellectual and motor spheres. In the opinion of Dr. Wells we have been trying to push experimental techniques too fast, and progress would have been sounder if we had been willing to stay longer on the clinical level. To be effective research in this field must cover longer periods than are usually represented in the material available to the individual graduate school.

Dr. Frank discussed the subject of "Sex and Emotion" from the cultural and intellectual viewpoint. He pointed out that culture patterns invade the organism, or are interposed between it and the world of things and persons, and these culture patterns dictate what, when and how organisms and the organisms' physiological processes may function. Education as the servant of culture tries to make individuals conform to social patterns. Individuals resent this. Now that so much is known of sex and so much has been gained in the way of physiological control, what interpretations of sex and its functions can we formulate that will serve as helpful social patterns in the development of personalities? Can we do something to promote the thinking of sex as a way of life, as a way of enriching life, instead of as individual gratification? How shall our patterns for masculine and feminine achievement be differentiated? What is the value to be attached to chastity? Can the creative impulse which manifests itself in the cruder forms of sex expression be led off into forms of creative adventure socially more timely or valuable?

Dr. Stoddard in his discussion of the emotional orientation of children warned of the difficulty of objective observations because of the adult tendency to read into children's emotional experiences more than may exist. He pointed out that emotional responses of new-born infants to types of stimuli employed had been shown to be largely undifferentiated. His paper provoked a general discussion of aggressiveness and submissiveness and social patterns in teachers and children, and whether education could be consciously directed toward the curbing of aggressiveness or the curing of over-submissiveness, and if so whether it would be desirable to attempt it. The possibility of developing an emotional maturity rating

scale was discussed. Dr. Stoddard pointed out how because of failure adequately to appraise the place of emotion in the child's life, the school plant is so arranged as to demand quiet, sitting still, little social intercourse. Intellect is placed on the throne and a taboo declared on children's likes and dislikes. Emotions are still active in civilized life but usually attached to the wrong objects, i.e., tigers and snakes instead of automobiles and microbes. Hence it is one of the big tasks of education to reorient the emotions, not by destroying emotion but by switching fear from tiger to automobile, from snake to microbe, so that constructive dreads will be socially helpful. Also general cultural improvement should make the intellectual in school coordinate with feelings and emotions, rather than supreme, and ambitions, hates and fears should be reduced by dethroning the competitive spirit in home, business and school.

Dr. May compared the child in the educational process to an organism growing in a culture after the analogy of a bacterial organism growing in what bacteriologists call a culture medium. The type of organism developed depends on the biological species of the organism, and upon the culture medium in which they are planted. The culture in which the child grows consists not only of what is immediately given, but includes the cultural road to past memories, customs, etc. The organism as it develops in the medium develops both a protective mechanism against the culture to keep out stimuli which are unpleasant and also the power to act selectively. Culture is transmitted to the growing organisms through the medium of person to person relations. Fundamental urges may assume different patterns according to the different cultures in which they function. While these culture patterns are laid down for all there are some who are such biological departures from the norm that they "just can't take it." Then you have conflicts and regressions and in extreme cases the creation by the organism of patterns of its own, as in the case of *dementia praecox*. As this process of transmitting goes on there are several types of reaction: there are insights on the intellectual level, and there are affective reactions (how he feels about what he sees).

Some transmitters of culture do a very much better job than others. One of the points of further investigation which might be pursued with very great profit would be to make a study of the emotional culture which we by our educational process do lay down. Without more definite specifications from the culture itself our educational process cannot attempt to lay down in the growing organism cultural patterns in respect to emotional expression. If one looks at the school as a constellation of human relations the things you want to look out for are the interplay of personalities which constitute the school. This has not been done and this is where the focus of attention in the study of emotions should lie. The real vital issues of life are vital because they are emotionally charged. The personality of the teacher is a large factor in the classroom. A classroom may be emotionally integrated or it may be disintegrated and cross currents much in evidence. Emotional factors may play as large a part in the child's reaction to any subject of instruction as the nature of the subject matter itself.

In the discussion of Dr. May's notable presentation, Professor Stoddard pointed out that if schools were to consider emotional reactions to instruction it would be necessary to take account of new variations since the sexes vary more emotionally than they do intellectually. It was also suggested that recognition must be accorded to the reality of spiritual drives and inspiration. Finally the question was raised to what quarter should we look for the cultural pattern of human relationships to be applied to any given biological strain, and how in the selection of teachers can there come a break in the vicious circle that like begets like.

Dr. Levy described from the rich case material of his personal practise as a psychiatrist, interesting examples of certain emotional types, particularly the over-protected child, the product of sibling rivalry, and other personalities warped or strongly modified on the emotional side toward irresponsibility or rebellious antagonism. He stated that the psychiatrist was not anxious to make teachers embryo psychiatrists, but did wish to make them human beings; to make them realize that

the behavior of children has a cause, and that in many cases the cause is to be found in certain emotional difficulties.

Dr. Munro in his discussion of Emotion and Aesthetic Experience and Expression opened up a field yet little explored and offered many stimulating suggestions. We all feel vaguely but strongly that in the realm of aesthetic feeling we will find many values which are accepted as the highest values of experience. Aesthetic experience operates to enrich and harmonize all the rest of life, besides being something worth while in itself. The study of aesthetic phenomena is just emerging from the metaphysical and literary stage toward the scientific, but has not reached it. Aesthetic experience can be achieved in all subjects, aesthetic or not. Teachers of economics, mathematics, etc., can bring out aesthetic aspects of these subjects. Art is or should be potentially the best place to develop aesthetic forms. You cannot aim directly at cultivating aesthetic emotion in students. You can arrange situations and habits so that this general functioning tends to bring out the kind of emotional experience which you want. Some claim aesthetic experience is a special and unique kind of emotion. The trend, however, is to regard it not as distinct but as a transformation of ordinary emotion. Emotion so directed toward expressive objects usually becomes milder than emotions of everyday life. The function of an art object, as, in some way a focus of attitudes, and as a stimulus of behavior, should be studied.

Dr. Zirbes discussed the emotional climates of schools as influenced by the nature of educational tasks, and emphasized the importance of setting up some values and objectives toward which we want to steer, and then creating institutions and practices which will produce what we desire, rather than always attempting to patch up the old machine for new purposes. If we are concerned about the effect of the present school set-up on the child's emotional life and his attitudes toward experiences we shall probably discover that not improvement or amendment of the school system is needed but complete revolution—construction of a curriculum from an entirely new point of view and with reference to totally differ-

ent criteria. We must make studies of emotions and the way the changing tasks affect the teacher's attitudes and her functioning. The thing we need to face is the fact that we now have the basis to proceed creatively in education. The prerequisites seem to be available and if we don't move now we are going to miss an opportunity to contribute to an emergent evolution. We need definite changes in our school program. We need fewer fixed appointments. We need longer periods of time in which to live. A great many children's whole emotional development is estopped by the fact that they are instructed in things in which they should be guided through long periods and years. If we direct scholastic attention toward emotion it is not that we want to dissect and dry it for the school's intellectual bill of fare, but in order that we may fence off a place for it in life against intellectual encroachment, room to be, to breathe, to expand, to reach down as far as it will into the depths, and to stretch up as far as it will toward the stars.

No resolutions were drafted by the conference nor was any complete official record kept of the proceedings. As Dr. Prescott said in opening the conference, the committee was in search of leads. It does not expect itself to reach any final answer to the questions it may raise, except to say definitely that here are questions the answers to which would be worth while if they could be found, and to point out the paths of experiment that may reasonably be expected to lead to solutions. The committee will have achieved its purpose if it is able to persuade the school world to look at itself from outside without preconception, and to ask is the artificial environment which we school men have provided for the growing organism of the child the culture which grows the kind of organism we most desire? Must the test-tube always be shaped like a finger? Is it worth while to carry the art of teaching to such a measure of success that you can even teach the horse to eat sawdust, if having learned, the horse dies? Are perhaps some of the elements of wholesome life to be found in emotion and not all in the intellectual processes?

Four days of ideal weather contributed to the enjoyment

of the Foundation's guests, and made possible a motor trip to the top of Green Mountain, a launch trip to Somes Sound, luncheon at Jordan's Pond, golf and swimming, all provided through the courtesy of Mrs. Walter G. Ladd. An opportunity to meet the summer colony was afforded at a tea given for the conference by Mrs. Dave Hennen Morris at her residence "Bogue Chitto" on Frenchman's Bay. Ambassador Morris, Chairman of the Board of the Macy Foundation, who had hoped to be present at the conference, was unexpectedly called away, to the regret of all, by official duties in connection with the death of Ambassador May.

Those participating in the conference, in addition to the eight leaders already named, were: President James R. Angell, Yale University; Professor Madison Bentley, Cornell University; Miss Marian Carswell, Principal, Hubbard Woods School, Winnetka, Illinois; Dr. Ludwig Kast, President, Josiah Macy, Junior, Foundation; Dr. Clarence C. Little, Jackson Research Laboratory, Bar Harbor; Dr. Charles Riborg Mann, Director, American Council on Education; Professor Herbert N. Shenton, Syracuse University; Dr. Samuel Trexler, Trustee, Macy Foundation; and six members of the American Council's Committee: Dr. Daniel A. Prescott, Rutgers University, Chairman; Dr. Frederick H. Lund, Temple University, Secretary; Dr. John H. MacCracken, Associate Director, American Council on Education; Dr. James Stuart Plant, Director, Essex County Juvenile Clinic, Newark, New Jersey; Dr. Vivian T. Thayer, Director, Ethical Culture Schools, New York City; Dr. M. Ernest Townsend, Principal, New Jersey State Normal School, Newark, New Jersey.

JOHN H. MACCRACKEN,
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The Training of Secondary School Teachers in England

WRITERS who believe that all improvements in education are absolutely dependent upon strong centralized authority and upon uniform laws and regulations tend to underestimate the work which has been done in England for the professional preparation of teachers in the secondary schools. Until 1902 there was in England no official recognition of the principle that secondary education is any concern of the state, and there was no possibility that the central government might direct or aid secondary education as such. Even now there are neither uniform requirements as to academic or professional training, which must be met by all teachers in secondary schools, nor any central authority to make or enforce such requirements. Nevertheless, a study of the development of English secondary schools in the last forty years shows that there has been a slow but definite increase in the number of secondary school teachers to receive professional training and that the nature of this training has been much influenced by certain decisions of the Board of Education.

When this Board was first established in 1899 it was given no authority over secondary schools but it has gradually acquired a strong influence over most of the secondary schools in England. It could not have been given direct authority over the secondary schools, because there has never been in England any system of secondary schools such as is found in Germany and in France. English secondary schools are entirely independent organizations managed by governing bodies of many different kinds, such as churches and other religious groups, by boards descended from old trade guilds, by trustees of private endowments, by individuals operating schools for private gain, together with various borough, county, and municipal authorities. Therefore, the only right the newly established Board of Education was given in re-

spect to secondary schools was the power to inspect every school that asked for their inspection. This might have been an empty right if the Board had not been given charge of those grants which since 1889 had been paid for instruction in science and art and if it had not specified that it would in the future give these grants to no schools which had not been inspected and recognized as efficient. When in 1902 the Board was empowered to give these grants not merely for instruction in science and art but also for secondary education as such, it thus acquired more influence over secondary education as a whole. With increasing amounts of money available for distribution, the number of schools it inspected and aided grew from year to year, as can be seen by examining the first three (3) columns of Table I. Thus, although the central educational organization in England had no authority to lay down regulations binding on all secondary schools, it was able to decide that certain conditions must be fulfilled by all schools that received government grants and was able to withhold grants from schools that did not meet these conditions. Also, the Board gradually came to have some influence even over schools not eligible for government grants; as early as 1906 it decided to publish at appropriate intervals a list of recognized secondary schools, to inspect without charge any school desiring such inspection, and to include on its list of efficient schools the ones it considered worthy of recognition. A glance at the last two columns of Table I will show that there has been a steadily growing number of secondary schools not receiving grants which have asked for the Board's inspection and have been recognized as efficient.

As soon as the inspectors began to examine secondary schools, they began to comment on the quality of teaching they found and on the necessity of improving this teaching. The Board's report for 1905-6 contained extracts from the reports of several inspectors deploring the poor teaching found in many schools, praising the excellent teaching found in a few places, and ending with this significant comment: "From these facts respecting the various types of Public Secondary Schools, and by the testimony of all the most com-

TABLE I

Figures with regard to grant-aided secondary schools in England and also with regard to schools recognized after full inspection as efficient in their staff, courses of instruction, premises and equipment.

| Year | Number of grant-aided schools | Number of pupils in grant-aided schools | Total number of schools recognized as efficient, grant-aided and without grants | Total number of pupils in efficient schools, grant-aided and without grants |
|---------|-------------------------------|-----------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1904-5 | 491 | 85,358 | | |
| 1905-6 | 600 | 105,034 | | |
| 1906-7 | 677 | 115,744 | | |
| 1907-8 | 737 | 124,588 | | |
| 1908-9 | 804 | 135,776 | 886 | 149,978 |
| 1909-10 | 841 | 141,558 | 928 | 157,022 |
| 1910-11 | 862 | 145,884 | 958 | 163,496 |
| 1911-12 | 885 | 151,045 | 986 | 169,822 |
| 1912-13 | 898 | 158,832 | 1,008 | 179,058 |
| 1913-14 | 910 | 170,119 | 1,027 | 192,257 |
| 1914-15 | 929 | 180,507 | 1,054 | 203,540 |
| 1915-16 | 931 | 189,487 | 1,056 | 214,192 (only estimates) |
| 1916-17 | 931 | 198,759 | 1,056 | 224,095 (only estimates) |
| 1917-18 | 943 | 216,765 | 1,073 | 242,024 |
| 1918-19 | 961 | 245,993 | 1,095 | 273,393 |
| 1919-20 | 1,021 | 282,005 | 1,222 | 318,276 |
| 1920-21 | 1,076 | 311,758 | 1,328 | 356,637 |
| 1921-22 | 1,115 | 330,472 | 1,407 | 381,458 |
| 1922-23 | 1,129 | 331,820 | 1,450 | 385,515 |
| 1923-24 | 1,137 | 327,601 | 1,481 | 384,793 |
| 1924-25 | 1,145 | 327,848 | 1,509 | 386,923 |
| 1925-26 | 1,161 | 328,074 | 1,555 | 391,351 |
| 1926-27 | 1,177 | 337,421 | 1,590 | 403,092 |
| 1927-28 | 1,187 | 342,957 | 1,622 | 412,542 |
| 1928-29 | 1,198 | 351,112 | 1,646 | 422,111 |
| 1929-30 | 1,208 | 356,742 | 1,736 | 433,627 |
| 1930-31 | 1,218 | 371,302 | 1,785 | 449,967 |
| 1931-32 | 1,228 | 389,525 | 1,848 | 470,805 |
| 1932-33 | 1,226 | 398,165 | 1,869 | 481,102 |

petent judges, it is clear that *an improved standard of teaching power* in secondary schools is at the root of all improvements and developments."¹ As a practical step toward this desired improvement in teaching the Board decided in this

¹ P. 59, Board of Education Report, 1905-6. (Italics are in the report.)

same year to give certain grants to help pay the expenses of students taking recognized professional courses for the training of teachers.

There was at that time the greatest variety of arrangements for the training of teachers in the secondary schools. There had been a Teacher's Training Syndicate in Cambridge since 1879, and Oxford had established a diploma in the theory, history, and practice of education in 1896. In addition there were secondary training departments in more than twenty universities and university colleges. There were also many other organizations besides universities engaged in training students, more particularly women students, to teach in the secondary schools. Cheltenham Ladies' College and the Maria Grey Training College had departments for the training of secondary teachers, which were at least as old as the one at Cambridge. Various denominational schools and colleges had long been engaged in the training of teachers for higher than elementary education, and other types of high schools and secondary schools had developed secondary training departments. Some of this training seems to have been a judicious mixture of theory and practice; some of it was entirely theoretical with no attempt to give the student any experience in actual teaching; some of it seems to have been nothing more than a system of apprenticeship, and apprenticeship at a rather low level. Also, although there were so many different varieties of training institutions, the number of their students was so small that the majority of teachers in the secondary schools had received no professional training whatsoever.

Although the Board of Education had no authority over any of these organizations training secondary teachers, its members and inspectors had some very definite opinions about this type of professional training. They were very uncertain as to the value of the courses that had been established; they were certain that the most pressing need of the secondary schools was the need for better teaching, but they were by no means sure that the courses of training being offered would supply this need. They were particularly troubled by three

dangers in professional training: (1) That time for such training might be taken out of the regular university course, whereas the entire time of the secondary and university courses was needed to produce the mastery of subject matter essential to a secondary school teacher; (2) that such professional training might be given too early, given to students who had no practical experience in teaching, knew nothing of its problems and difficulties, and were therefore unable to understand or apply the principles taught them in lectures on educational theory; and (3) that the training might be too general and too vague to be of any real use. Many expressed the opinion that professional training in education should consist largely in the study of the methods of teaching one or two subjects in which the student was already reasonably well grounded, and that this instruction should be accompanied by observation of other teachers' methods and by considerable practice in teaching both under observation and under normal conditions.

Since most of the educational authorities felt uncertain about the value of the training being offered for secondary teachers, it may seem strange that the Board of Education should have decided to use part of its very limited educational appropriation for grants in behalf of students undertaking such training, but it certainly was natural that it should attempt to guard against these recognized difficulties. Because the Board had no authority over teacher-training institutions, it proceeded very much as it had done in the case of the secondary schools themselves, by setting up a list of requirements that must be met by any training institution in order to receive grants for its students and also by drawing up a list of recognized institutions including all those doing efficient work according to its standards, even those on technical grounds unable to receive grants from the public funds.

It is interesting to examine these first regulations for secondary-training institutions which were to receive grants or to be placed on the list of recognized institutions, in order to see how they influenced the development of secondary training and managed to guard against the dangers mentioned above.

Some of the institutions existing at that time admitted only university graduates to their professional course, some of them combined the professional work with the work for the university degree, and some gave this professional training to students who had done little, if any, academic work beyond secondary school level. The Board required that any student who was to receive a government grant must either possess a university degree or some certificate equivalent to a university degree, such as the certificates given to women by both Cambridge and Oxford at that time for the same achievements that would entitle a man to a degree. It is at least partly the result of this requirement that preparation for secondary teaching in England is now practically confined to graduate work. Although university undergraduates may and do take education as a subsidiary subject, studying the history and philosophy of education or educational psychology just as they would study the history of art or animal psychology, the students in the professional training courses are, with certain exceptions, university graduates and usually have taken their degrees with honors. It is emphatically true that in England the professional training of secondary teachers has not been purchased at the price of reducing the time given to the mastery of the subject to be taught. To guard against the danger that the training might be given to students who knew little or nothing of the practical problems of teaching and could therefore neither understand nor apply the theories they learned in lectures, the Board provided that every plan of training that was to be aided by government grants must include at least sixty days of actual school experience, at least two-thirds of which must be in a secondary school. This regulation evidently caused more difficulty than any other, and there were many protests against it. Many institutions that had undertaken to train secondary teachers stated that it was impossible for them to provide for that much practice in secondary schools, either because they were situated in such small towns that the few secondary schools available would be injured by the presence of large groups of practice students or else because the good secondary schools in the vicinity re-

fused to allow inexperienced graduates to practice on their pupils. Also some university professors objected to this ruling, because they were themselves more interested in erudite educational research than they were in simple problems of classroom teaching and therefore wished this whole graduate year to be spent on scholarly research. The members of the Board, however, insisted firmly that educational theory divorced from any opportunity to apply it in the classroom was sure to seem unreal and even unintelligible to the young student, was of little help in making him a satisfactory teacher, and should not, therefore, be subsidized from the public funds. Gradually institution after institution found it possible to make arrangements for some secondary schools to give this school experience until now the long practice period has come to be accepted as a necessary part of any professional training. Another regulation, which the Board made for the purpose of obtaining professional training to apply closely to the practical problems of the classroom and to help the young graduates to become better teachers, was the requirement that at least half of the staff of a school to be ranked as efficient should have been for a reasonable time successful teachers in secondary schools. All of the professors and tutors whom I met in training departments had taught for years in secondary schools, and the effect of this experience was marked. Never have I heard lectures in education more practical or more richly illustrated with concrete applications and with personal experiences. In his farewell address to the graduating students of the Institute of Education of London University, Sir Percy Nunn spoke vividly of his own experiences as a secondary school master and urged that education is primarily an affair between teacher and pupils, and that it is only secondarily an affair of educational statistics and psychological experiments. Also, because the heads of the training departments, the professors, and the tutors are all experienced teachers, they often give demonstration lessons, where they teach secondary school classes, then dismiss the pupils and proceed to analyze and discuss the lesson with the students in training. I saw the head of the education depart-

ment in the university college of Southampton teach a simple poem to a group of twelve year old children so sympathetically that after the first five minutes they seemed utterly unconscious of the large group of adults watching the performance and so vividly that the words of that poem still ring in my own ears. The head of one training department told me of an experiment he had been carrying out that year teaching mathematics to a class of elementary school boys, dull and retarded, in which he had not only planned with their regular teacher some very original work but also had done much of the teaching himself. Teachers who have thus kept themselves in constant touch with the secondary school are far better fitted to help students to become effective teachers than are men who have done scholarly work in statistical or experimental research but who for many years have not taught or, in some cases, have never taught classes in a secondary school.

The Board of Education drew up its first list of efficient training institutions and paid its first grants in behalf of students in the year 1907-8. As can be seen in Table II only seventeen institutions met all of the requirements of the Board so that they could be recognized as efficient, four of these could not receive grants because of their insufficiency of students, and three of them because they put religious restrictions upon their students or teachers. The Board paid just under £1,900 to ten training institutions, of which five formed part of a university or of a university college. In these seventeen institutions only fifteen men and one hundred and fifty-six women were trained in the year 1907-8. When we realize that there were at that time more than 9,000 teachers in these secondary schools on the Board's efficient list, we see how tiny a proportion of these teachers could have had specific professional preparation for secondary work. An examination of Table II will show that these numbers increased very slowly until 1914, that there was a very great decrease in numbers during the war years, and that after 1920 the numbers have increased very rapidly, more than doubling in the two years from 1920 to 1922 and almost

TABLE II

Figures with regard to institutions recognized as efficient for the training of secondary teachers and the number of students who completed courses of training in these institutions. (The last column states the number of students who completed a course of training which centered in the secondary school as explained on pages 464-465.)

| Year | Number of institutions recognized | Number of institutions receiving grants | Number of students who completed training in recognized institutions | | Total | Students taking training which centers in the secondary school |
|----------------------|-----------------------------------|-----------------------------------------|----------------------------------------------------------------------|--------------|-------|----------------------------------------------------------------|
| | | | <i>Men</i> | <i>Women</i> | | |
| 1907-8 | 17 | 10 | 15 | 156 | 171 | |
| 1908-9 | 18 | 13 | 23 | 176 | 199 | |
| 1909-10 | 19 | 12 | 35 | 139 | 174 | |
| 1910-11 | 20 | 12 | 30 | 133 | 163 | |
| 1911-12 | 20 | | 43 | 156 | 199 | |
| 1912-13 | 19 | 13 | 38 | 178 | 216 | |
| 1913-14 | 21 | 14 | 38 | 167 | 205 | |
| 1914-15 | 21 | | 25 | 182 | 237 | 2 |
| 1915-16 | | | 11 | 203 | 214 | |
| 1916-17 | 18 | | 2 | 125 | 127 | 1 |
| 1917-18 | 18 | | 4 | 108 | 112 | 2 |
| 1918-19 | 19 | | 11 | 115 | 126 | 2 |
| 1919-20 | 20 | | 43 | 160 | 203 | |
| 1920-21 | 22 | | 78 | 180 | 258 | |
| 1921-22 | 22 | | 220 | 265 | 485 | 2 |
| 1922-23 | 25 | | 342 | 325 | 667 | 3 |
| 1923-24 | 25 | | 263 | 385 | 649 | 3 |
| 1924-25 | 26 | | 299 | 509 | 808 | 7 |
| 1925-26 ¹ | | | 354 | 563 | 917 | |
| 1926-27 ¹ | | | 600 | 934 | 1,534 | |
| 1927-28 ¹ | | | 621 | 960 | 1,581 | |
| 1928-29 ¹ | | | 647 | 1,015 | 1,662 | |
| 1929-30 ¹ | | | 700 | 1,046 | 1,746 | |
| 1930-31 ¹ | | | 870 | 1,143 | 2,013 | |
| 1931-32 ¹ | | | 1,010 | 1,069 | 2,079 | |
| 1932-33 ¹ | | | | | | |

¹ Since 1926 the regulations of the Board of Education have provided that any student who has completed a course for secondary teachers shall also be certificated as an elementary teacher. This regulation makes it difficult to compare statistics before and after 1926. The numbers of students given in Table II for the years 1926-33 include only students who have taken professional post-graduate courses in addition to their university courses, and are therefore prepared to teach in secondary schools.

doubling again in the four years from 1922 to 1926. It will also be seen that the Board has been very cautious about recognizing new institutions for training, never recognizing more

than three new ones in any year, and that in every year but one, there have been far more women than men who completed these training courses, a very significant fact in England, where there are more men than women teaching in the secondary schools. It is rather difficult to compare the figures before and after 1926 because in that year the Board of Education made the ruling that all students who have completed courses of training for secondary schools may be certificated as elementary teachers and therefore the reports since 1926 make no specific distinction between elementary and secondary training. I have included in the statements in Table II for the years 1926-27 only university graduates who had taken a professional post-graduate course in addition to their university courses, and were therefore prepared to teach in secondary schools.

The greatest change that has been made in the Board's regulations for the training of teachers was made in 1913 when, in addition to the method of training described above pivoting on a university or university college, an alternative form of training was introduced pivoting on the secondary school giving the teaching experience. Although very few students have ever been trained under this alternative plan, it seems wise to discuss it because of the light thrown on the attitude of the Board toward experimentation and toward the free development of individual initiative. It shows clearly that the Board not only lacked the power to build up a uniform and closely organized system of training for secondary work, but that it definitely desired to support various lines of endeavor and to avoid any standardization. The report for 1912-3 discussed fully the claim that the training of secondary teachers should be carried out by the secondary schools themselves rather than by universities and university colleges using secondary schools as their laboratories. In its report the Board compared the advantages and disadvantages of the proposed plan with those of the one already in operation, and it distinctly stated that it was not convinced that one of these methods was any better than the other, that the present method was failing to attract as many intending teachers as

were needed and, particularly, was failing to attract as many men teachers as was desirable. Therefore the Board decided not only to recognize this alternative method but also to support it by grants. Under the first plan the Board had paid grants to no institution with less than ten students, and then it paid at the rate of £18 per student. Realizing that the second plan could not be aided in this way since few secondary schools could care for as many as ten practice students, the Board offered to pay a grant of £40 for the first student, £30 for the second, and £20 for the third. It stipulated that the students must have degrees in honors, and that they must spend an entire year in one secondary school, half in observation and teaching and the other half in a systematic study of the principles of teaching. It ruled that the secondary school must be approved by the Board for this purpose, and that the plans made by the school for providing a systematic course in the practice and principles of teaching must also be approved. The next year it received applications from six secondary schools to have these teachers in training, and it approved of four, but, as can be seen by Table II, only two students completed their training in this way in 1914-5, none at all the next year, only one in 1916-7, and never more than three until 1924-5 when there were seven students who completed their work in this manner. After 1926 I found no reports which separated this method of training from the more popular method centering in a university or university college.

Since the Board of Education has thus favored experimentation, it is natural that there should be only a few uniform factors present in all the systems of professional training for secondary teachers and that in all other respects there should be the greatest variety. All of the institutions I visited or heard described planned one year of professional work for university graduates; all of them provided for at least sixty days teaching experience in a secondary school where the student was required to teach from one to three times a day, to help in various school duties like the correction of papers or supervision of games to observe experienced teachers, and to attend staff meetings; all required practically the same

courses in the theory of education and in educational methods, differing only in minor points such as the requirement of history of education; all of them required the student to do three weeks' teaching before beginning his professional course. This three weeks' experience is supposed to serve two purposes: to give the student some practical experience on which to base his educational theory and also to demonstrate the unfitness of certain students for the teaching profession before they have undertaken the year's course. However, it is a common practice to fulfill this three weeks' teaching requirement at the beginning of the undergraduate university course, at least three years before the beginning of the graduate professional course. This practice interferes with both of the purposes of the requirement, because it is too far separated from the professional training and because it is difficult to judge how an eighteen-year-old boy or girl will develop.

With the exception of these few uniform factors there is the greatest variety in the practice of different institutions for the training of secondary teachers. Some offer many courses of lectures and require attendance upon them, others offer few lectures and carry on their instruction mostly by essays discussed with a tutor. Some of them send each student to one secondary school for his entire experience, others move him about during the year so that he comes in contact with several varieties of schools. Some of them turn over the entire supervision of the practical work to the secondary school; others rely mostly on the secondary school for supervision but do send one representative from the training department to visit each student once or twice and to confer with him, with the head-master or head-mistress, and with the teachers in charge of his work; while still others supervise the student closely, making daily visits in the beginning and visiting him at least once a week during the whole period of his practical work. Some institutions send each teacher in the education department to supervise students teaching widely different subjects, whereas others group together all the students teaching the same subject under the direction of a tutor who is a specialist

in that subject and who supervises their work in that subject alone.

There is also the widest variety in time schedules. According to one plan the students follow the same schedule for the entire year, giving two days a week to practical teaching experience and the other three days to lectures and readings in the theory of education; according to a second plan the students follow this same schedule for most of the year but add several weeks at the end when they teach five days a week and thus gain more consecutive teaching experience; according to a third plan the students devote one entire term, usually the middle term, to teaching experience and the other two terms to theory. I found some earnest advocates of each of these plans and many who felt that each arrangement has certain advantages and certain disadvantages. On the one hand some university teachers felt that students did better work in educational theory when their reading and study was not interrupted by the constant demands of practical teaching; but on the other hand many university teachers believed that students who had only three weeks' experience in an elementary school, and that experience often three years behind them, lacked all basis for understanding their first term of theoretical work and only awoke to the value of that work after finishing their term of practical teaching experience. I visited several secondary schools that had some pupil teachers working under the first plan and others under the third. Some of the regular teachers in these schools and one head-mistress told me they were sure that the students benefitted more from their experience when they taught only twice a week, could use their theoretical instruction to diagnose their difficulties and suggest remedies, and had the whole year in which to find themselves; but that the students who came every day for an entire term were more helpful to the school. However, another head-mistress who had dealt with students working under both plans was equally certain that the students in training as well as the school benefitted more by the concentrated experience. I was interested in the way the regular

teachers managed their class work when student teachers came only twice a week. In foreign languages the class usually read one book on the two days when the student teacher took charge and either read a different book or worked on grammar, composition and conversation the other three days; mathematics presented no difficulty because in English schools they usually devote two days to arithmetic and three to algebra, or three to algebra and two to geometry; there are also several subjects, history being one, which are taught only twice a week in certain forms and can therefore be taught entirely by student teachers. Only a few teachers found any difficulty in dividing up the work when student teachers came only twice a week. For the most part institutions situated in small towns like Oxford and Cambridge, where there are comparatively few secondary schools, devote the first and third terms to the study of educational theory and during the second term send their students to secondary schools in various parts of England. The institutions situated in large cities, on the other hand, tend to follow a uniform schedule for the entire year, devoting three days a week to theory and two to practice.

I visited a few classes in educational theory, and they seemed much like our own classes in the history and philosophy of education and in methods of teaching. I also visited many classes taught by student teachers. These teachers ranged from one so poor that she could not be recommended either by her university training department or the secondary school in which she was practicing to one so good that the head-mistress had decided to appoint her for the following year to fill a vacancy in the school, in spite of the fact that there had been between two and three hundred applicants for the position. All but the very poorest of these student teachers taught with a finish and precision which showed that they had given abundant time to the preparation of the given lesson, that they had known their pupils for many months, and that they were on familiar ground. Not one of them was teaching for more than three periods a day and many were teaching only one or two, so that they had not only

plenty of time to prepare thoroughly for each lesson, to look up related illustrative material, and to weigh the value of different methods of presentation, but also time to reflect upon each lesson after it had been taught, to analyze it and learn from their mistakes, and to seek advice from experienced teachers upon any problems it presented. When I compared these student teachers with the beginning teachers in our own secondary schools who teach five, six, and sometimes even seven periods a day, and rush from one mistake to another too swiftly to learn much from any of them, I wished that we also might have an adequate period of practice teaching. In no case did the teacher in charge remain in the room while I observed a student teacher. However, I was observing at the end of the academic year. In every case the regular teacher told me that she had remained in the class room at the beginning, had given suggestions as to the presentation of subject-matter and the management of the class, and only when she was convinced that the student teacher would profit more by being left on her own responsibility did she leave her for an entire period. When I compared the experience of these student teachers with that of beginning teachers I have known in our junior and senior high schools, who are often persecuted by noisy, independent and rebellious pupils, who must meet pupils with long experience in "trying out" a new teacher, and who are given no chance to show whether they can teach until they have first shown their ability to quell a mob, I wished that we might in our own country adopt a plan that might give our beginning teachers an opportunity to think first of their teaching and only later of the question of discipline. Since there is at present an over-supply of college graduates who fulfill their state requirements for teachers certificates and are candidates for teaching positions, it would be easy to increase these requirements. If many of our colleges and universities would establish graduate courses with such a judicious mixture of theory and practice that the theory would illumine the teaching experience and the teaching experience would show the need for the theory, and if they prepared students who were more successful as teachers than

college graduates who lack this professional training, they would create a demand for teachers with such training. It would then become the accepted thing for intending teachers to take a year of graduate work to prepare for their profession, and American teachers, also, would have an adequate period of training not purchased at the price of shortening and weakening their period of academic preparation.

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The 1934 College Sophomore Testing Program

I. INTRODUCTION

"THERE is perhaps no lesson which history teaches more plainly than that pressure toward conformity, on the one hand, and the advance of civilization on the other, stand in inverse ratio to each other."¹ The indications of this lesson from history are as patent in education as elsewhere, since conformity, particularly in the matter of curricula, has long been a problem crying for solution. To point out the dangers of conformity and to help release education from the pattern influences which would stultify the individual have been the aims of the Committee on Educational Testing in conducting its various programs of the past three years. Democratic ideals, far from aiming at a dead level of mediocrity, recognize and accept individual differences and would make use of them for socially acceptable ends. True education makes distinctions among men; it means finding one's own level; but misguided theorists on democracy and democratic education often obscure this fundamental truth. It is the function of the committee to help make the philosophy of individual guidance practical and in so doing to support the widespread movement toward revaluing educational traditions. In this objective the committee has enjoyed the collaboration of other American Council agencies, of several state organizations, of numerous colleges, and of several scientific societies.

Happily, indeed, more and more colleges are giving up the notion that all students should be poured into the same educational mould. In increasing numbers they are calling into question units of work, course credits, and the composite

¹ Chase, Harry W., Inaugural Address as Chancellor of New York University. *School and Society*, June 23, 1934.

grade as the sole index of school history, and as the only basis for recommending educational opportunities. In typical vein, the chairman of a college department recently complained that the composite grade meant nothing when he was faced with advising students to continue or avoid sequences of study and for recommending graduates for specific positions. His comment was this: "Certainly teachers should record quantitative estimates of the specific abilities and achievements of their pupils; and they should commit to writing their opinions about students as lazy or energetic and as capable of studying or working apart from a straw-boss."

Since 1928 the American Council has not only urged such a distinction in record keeping but has provided the cumulative record form for the purpose. In its original form this record is used by 120 institutions, and dozens of schools have adopted modifications. Most recently the Association of Minnesota College Presidents incorporated a modified record in the college admissions blank used throughout the state; and the secondary schools of Washington, D. C., are in the process of introducing a similar record in conjunction with a long-term program. This experiment has been undertaken with a view to developing what may become a national model for our schools in educational guidance and character building. Surely the increased use of such records, coupled with the increasingly accurate measures of learning now available, promises to negate the common charge against education epitomized by Robert Louis Stevenson, thus: "For though here and there a Lord Macaulay may escape from school honours with all his wits about him, most boys pay so dear for their medals that they never afterwards have shot in their locker, and begin the world bankrupt."

Once the composite grade is broken down and its component elements are identified and recorded systematically, it becomes immediately clear that something more is needed to satisfy a philosophy of education which is thoroughgoing. College and high school courses through years of curriculum making have been so split and fragmented that even a number of them taken collectively do not adequately cover a field

of study. And the corollary of this fact is that instructors incline to emphasize in any given course the things which interest them most, to test students only on this fragment of knowledge, and to neglect its larger aspects, or even to discourage students from broad acquaintance with the field. The unit-course system is inevitably restricted and distorted. Recognition of this fact led the committee to recommend the use of comprehensive examinations which purport to cover a larger share of content than that covered in any conventional course. Since extensive researches show that the majority of pupils gain much of their knowledge and do much of their thinking independent of formal study, and since diagnosing students is prerequisite to advising educationally with them, these comprehensive examinations have been urged as a partial means of securing a thorough survey of any given student's educational status and needs.

For years great emphasis has centered on measuring the extent to which pupils achieve the avowed objectives of particular courses in particular colleges. While this emphasis is entirely justified, in most cases such specialized measurement must still be left to the individual teacher. There is reason to believe, however, that progress in devising tests to satisfy the needs of many courses with relatively common content will be more rapid in the immediate future. During recent years more extensive and intimate cooperation has been established between test technicians on the one hand and subject matter experts and teachers on the other. These experts and teachers have demonstrated their skill in defining specialized objectives and have exercised patience in enabling test technicians to understand such definitions more precisely. This more extensive collaboration is most apparent in the field of the natural sciences, mathematics, and languages, but the advances made in these fields will soon be paralleled in the more difficult field of the social sciences.

College and school teachers in increasing numbers emphasize the importance of using tests that are more comprehensive than those constructed to measure specialized objectives. This emphasis has grown largely from the need for

learning as much as possible about students and from a growing realization that the educational status of a student does not depend solely, and in many cases does not depend immediately, upon his status in one specialized objective or in any one group of objectives set by a school or a teacher. The pupil is regarded as more important than the course of study. The motive for determining by course examinations whether the student should pass or fail still persists; but it is accompanied by a much broader and more constructive motive, namely, that of learning as much as possible about all the abilities, achievements, and interests of the pupil, so that such information can be used constructively in the work of guiding and helping him into experiences that will make him a more effective and happier citizen. As a point of educational reference, teachers are increasingly more interested in the welfare of the pupil than in the content of their own special subject matter. They tend to regard their own and all other subject matters as means rather than ends, as instrumentalities to be used only when they produce constructive results rather than as necessary prerequisites to education, culture, and good citizenship. Many teachers are now no longer satisfied merely to pass or fail a student in a particular course. The fundamental purpose of the school is to help make pupils better citizens, and to realize this purpose is by far broader and more important than to pass or flunk a student in a particular course or set of courses. This does not mean that passing or failing is unimportant. On the contrary, its meaning is more clearly apprehended and its importance better appreciated than formerly. Such information is now considered in its proper perspective, namely, as one of many important bits of information which the school may use to make a more effective citizen, if not a better scholar, out of the pupil in question. Failure to pass a course, according to this new outlook, is no longer regarded as an academic disgrace or even as unfortunate. Rather, it is an indication that the student's efforts have been misdirected and should be re-directed along lines more compatible with his interests and his needs as an individual in society.

The examinations used in the study basic to this report were formulated to sample the content of wide fields of knowledge, general culture, general mathematics, general science, the foreign languages, and contemporary affairs. Specialized examinations in the sciences were offered, in addition, to aid teachers in evaluating special objectives. But the general comprehensive tests were the point of departure for discovering the trend of student interest and for judging whether present achievement makes one field of training more promising than another.

That these general tests are sufficiently comprehensive for the purpose of diagnosing interests and range of knowledge may be more apparent from an illustration. For example, the most recently recommended examination, the Cooperative Contemporary Affairs Test, represents the combined work of educational measurement experts and of sixteen professors from the social studies, the sciences, and art. Before editorial selection of items was made, 9,908 articles appearing in commonly read journals were analyzed and an elaborate chart was constructed so that ratios between the amount of space given various topics in the journals and the number of items on these topics could be established.

The percentile tables in a subsequent section of this report are based on a relatively small number of cases but only because colleges were delayed in making returns. Actually nearly 20,000 copies of the examination have been distributed for use in schools, and reception has been almost universally favorable. The following comment is typical:

"These tests (sophomore program) are of inestimable value to us in proving to the students where they stand in social illiteracy. Each spring, after the tests are given, the amount of general reading on the part of our group increases by 150 per cent! But by fall the shock has worn off a bit and needs to be repeated. A new set of tests will help greatly. This spring, the Contemporary Affairs Test was tried by faculty as well as students, and we were amazed to find out how little informed we actually were. Then, after the tests had been rated, the students took them home and tried them on family and friends. They are a forceful stimulus to think-

ing, especially when the student does not agree with the key and sets out to prove his point!"

Interest in social affairs is something that transcends any course, but knowing the extent of a student's understanding of contemporary events may be very significant when an administrator advises with him in regard to a sequence of studies. Recognizing this fact, the American Association of Schools and Departments of Journalism, for example, is considering through its research council the appointment of a committee to aid further in the developing of such examinations and to propose a departmental program of testing students before and after given periods of time with comparable instruments so that a norm of expectancy may be set up. Students whose gains are noteworthy may then be encouraged to continue study in a field in which they have already given promise.

Already the American Association of Physics Teachers has developed such a program in the field of physics, in which 355 departments have collaborated. The Mathematical Association of America has appointed a committee to consider systematic testing and guidance in their field. In chemistry and zoology corresponding programs are contemplated. All this is evidence that college departments are interested in the diagnosis of the individual in terms of his broad interests. Once these have been determined, advice for subsequent specialization may be more intelligently offered. As these various programs become definite it is believed that colleges will continue their support and will bend their efforts toward redirecting the emphasis in teaching accordingly.

Too long the schools have sanctioned undifferentiated mass education. They are now valiantly searching for ways of placing instruction on a teacher-student rather than on a teacher-class basis. Class instruction will, of course, continue, as it should; but it will be supplemented by self-initiated and self-propelled study over and above the core material made available through lectures. Teaching, like the practice of medicine, is an art. The physician makes use of chemical analyses, fluoroscopic examinations, and the like; the teacher

uses achievement tests, personality ratings, and narrative accounts of school and work history. In the final analysis both teacher and physician prescribe or advise intelligently only in terms of the total clinical picture—not in terms of any single test or interview.

Mediocrity, as an ideal, is not democratic. Mass instruction designed to level individual differences cannot show the schools what to do for the unusual or the failing student. In the past, colleges have tried to solve the problem by two administrative devices. One group of colleges would throw open their doors to all comers; the other group would select their students with great care. Both devices have failed dismally because of the enormous range of the ability and special interests which operate even in the most highly selective of schools. No general student body represents a homogeneity sufficient to justify imposing a uniform curriculum. This is the fundamental fact in higher education. Individualized education within colleges, in addition to group selection for college objectives, is most likely to bring the problem to solution.

Recent reports from the North Central Association² and the pronouncement of officers engaged in the study clarify the need for colleges to define their objectives with care. This point of view, we believe, is an extension of the growing demand for individualized education; it favors a kind of education designed to help all the children of all the people; it is a signal attack upon the problem of intelligently directed education. In the future, accreditation will likely be in terms of how accurately colleges define and pursue their objectives, how well they select their students, and how adequately they provide opportunities which will fit each student for a unique function within the general objectives set by the college. Ac-

² Haggerty, M. E., "Accrediting Institutions of Higher Education." *The North Central Association Quarterly*, July, 1934. North Central Association of Colleges and Secondary Schools, Commission on Institutions of Higher Education, Statement of Policy, February 3, 1934.

Zook, Geo. F., "Accredited Schools and Colleges." *THE EDUCATIONAL RECORD*, January, 1934.

creditation will gain significance in the future largely through efforts toward individualized education.

II. THE 1934 COLLEGE TESTING PROGRAM

Participating Colleges.—The total number of colleges ordering tests specifically for the college sophomore program was 137; the total number ordering tests for the physics program was 355. The latter project grew out of previous sophomore surveys and is a joint enterprise sponsored by the committee making the present report and the Committee on Tests of the American Association of Physics Teachers. Because a considerable number of the colleges failed to make returns in time for full use in this report, the total number of colleges represented in the percentile tables for the sophomore tests is 95, the total number of colleges represented in the tables of averages is 102, and the total number of colleges represented in the portion of this report relating to the physics testing program is 255. Since the full report of the physics testing program will appear elsewhere, the list of the colleges participating in it will not be included here. The colleges taking part in the sophomore program are scattered in 37 states; the names are listed below by states:

ARKANSAS

- The College of the Ozarks
- * Harding College

CALIFORNIA

- * Immaculate Heart College (3)
- * La Verne College (3)
- Mills College (2) (3)
- * Modesto Junior College
- Sacramento Junior College
- * San Benito County Jr. College (3)

COLORADO

- Colorado Agricultural College (2) (3)
- Colorado State Teachers College (2) (3)

CONNECTICUT

- Teachers College of Connecticut (2) (3)

DISTRICT OF COLUMBIA

- Mt. Vernon Seminary (2) (3)
- Trinity College (2) (3)

GEORGIA

- * Bessie Tift College
- Emory University (2) (3)
- Mercer University (3)
- * Morehouse College
- Oxford Junior College (3)
- Valdosta Junior College (3)

* Colleges which are not included in the national sophomore distributions.

(2) Colleges which gave the tests in 1932.

(3) Colleges which gave the tests in 1933.

ILLINOIS

- Aurora College (3)
- Rosary College (3)
- St. Xavier College for
Women (2) (3)
- * Wheaton College (2) (3)

INDIANA

- * Manchester College

IOWA

- * Centerville Junior College (2) (3)
- * Estherville Junior College
- * Fort Dodge Junior College
- Graceland College (2) (3)
- Iowa State Teachers College
- * Luther College
- Parsons College
- Trinity College (3)
- Wartburg College (2) (3)

KANSAS

- St. John's College (2) (3)

KENTUCKY

- Berea College (2) (3)
- Caney Junior College (2) (3)
- Centre College (2) (3)
- * Eastern Kentucky State Teachers
College (3)
- * Louisville Municipal College for
Negroes (3)
- University of Louisville (2) (3)
- * Villa Madonna College

MAINE

- Westbrook Junior College (3)

MARYLAND

- Bluc Ridge College (3)
- * Morgan College
- St. Mary's Female
Seminary (2) (3)
- Western Maryland
College (2) (3)

MICHIGAN

- Adrian College (3)
- Albion College
- Battle Creek College

MINNESOTA

- * Augsburg College (2) (3)
- Carleton College (2) (3)
- College of St. Benedict (3)
- College of St. Catherine (2) (3)
- College of St. Scholastica (2) (3)
- College of St. Thomas (2) (3)
- Concordia College (2) (3)
- Eveleth Junior College (3)
- Itasca Junior College (2) (3)
- Macalester College
- St. John's University (2) (3)
- * St. Mary's College
- St. Paul-Luther College (2) (3)
- University of Minnesota (2) (3)
- * Virginia Junior College (3)

MISSISSIPPI

- All Saints' College
- Bellhaven College
- Millsaps College (2) (3)

MISSOURI

- Kansas City Teachers
College (2) (3)
- Kemper Military School (2) (3)
- * Missouri Valley College (3)
- Northeast Junior College (2) (3)
- Park College (2) (3)
- * Stephens College (2) (3)

MONTANA

- Carroll College (3)

NEBRASKA

- Hebron College (2) (3)
- * Nebraska Wesleyan College
- * Scottsbluff Junior College (3)
- * State Teachers College, Wayne

NEW JERSEY

- * Centenary Junior College
- College of St. Elizabeth (2) (3)
- Brothers College of Drew Univer-
sity (2) (3)
- Georgian Court College (3)

NEW MEXICO

- New Mexico Normal
University (3)

* Colleges which are not included in the national sophomore distributions.

(2) Colleges which gave the tests in 1932.

(3) Colleges which gave the tests in 1933.

NEW YORK

- Colgate University
- * Columbia College (3)
- * Experiential Groups (3)
- Sarah Lawrence College
- * Syracuse University, School of Education
- State Normal and Training School
- University of Buffalo (2) (3)

NORTH CAROLINA

- Barber-Scotia Junior College
- * Duke University
- * Shaw University

OHIO

- Antioch College (2) (3)
- * Hiram College (3)
- * Kenyon College
- * Muskingum College (3)
- Otterbein College
- * St. John's College (3)
- Wittenberg College (2) (3)

OKLAHOMA

- * Colored Agricultural & Normal University
- Muskogee Junior College (2) (3)
- Oklahoma City University

OREGON

- Linfield College (3)
- Oregon Normal School (3)

PENNSYLVANIA

- * Allegheny College (3)
- * Cedar Crest College
- College Misericordia (3)
- Marywood College (3)
- Penn Hall Junior College (3)
- * Pennsylvania State College
- Rosemont College (3)
- St. Thomas College (2) (3)
- Westminster College

RHODE ISLAND

- Rhode Island College of Education (3)
- Rhode Island State College

SOUTH CAROLINA

- Presbyterian College (3)
- University of South Carolina

SOUTH DAKOTA

- Augustana College

TENNESSEE

- * Hiwassee College
- Knoxville College (3)
- Southwestern (2) (3)
- Tusculum College (2) (3)
- Ward-Belmont College (2) (3)

TEXAS

- Clarendon Junior College
- * Incarnate Word College
- Paris Junior College (3)
- Southwestern University
- Texas Christian University (2) (3)

VERMONT

- State Normal School, Johnson

VIRGINIA

- Sweet Briar College (2) (3)

WASHINGTON

- State Normal School,
- Bellingham (3)
- State Normal School, Cheney

WEST VIRGINIA

- * Bethany College (2) (3)
- * New River State College

WISCONSIN

- Northwestern College
- The Stout Institute (3)

The Tests Used.—The tests used in the 1934 program include several in addition to those used in the 1933 program. The latter included the Cooperative English Test, Series 1,

* Colleges which are not included in the national sophomore distributions.

(2) Colleges which gave the tests in 1932.

(3) Colleges which gave the tests in 1933.

Cooperative Literary Acquaintance Test, Cooperative General Culture Test, Cooperative General Science Test for College Classes, Cooperative General Mathematics Test for College Classes, Cooperative French Test, Cooperative Spanish Test, Cooperative German Test, and Cooperative Latin Test, all of which are described in the EDUCATIONAL RECORD for October, 1933. The additional tests used in the 1934 program are the following:

1. Cooperative Contemporary Affairs Test, by Alvin C. Eurich, Elmo C. Wilson and others. This test is based on an analysis of the content of current literature and is intended to measure the extent to which students keep abreast of significant current affairs in the fields of art, literature, government, international relations, politics, economics, religion, etc.; 207 items, 90 minutes.

2. Cooperative Physics Tests, by the Committee on Tests of the American Association of Physics Teachers. Part I, Mechanics, 60 minutes; Part II, Heat, 30 minutes; Part III, Sound and Wave Motion, 20 minutes; Part IV, Light, 40 minutes; Part V, Electricity, 50 minutes; Part VI, Modern Physics, 25 minutes. The six units together constitute a general comprehensive test in college physics, but each college was advised to choose a combination of topics to suit local needs.

3. Cooperative Chemistry Tests, by B. C. Hendricks, F. P. Frutchey, A. G. Horney, R. W. Tyler, and others. Part I, Information and Terminology, 90 minutes; Part II, Interpretation of Experiments, 45 minutes; Part III, Application of Principles, 45 minutes; Part IV, Symbols, Formulae and Equations, 75 minutes; C., a combined test covering three important aspects of elementary chemistry, Information, Terminology; and Application of Principles, 2 hours.

4. Cooperative Zoology Tests, by W. M. Barrows, J. W. Price, L. H. Snyder, and others. Part I, Information and Terminology, 90 minutes; Part II, Interpretation of Experiments, 45 minutes; Part III, Application of Principles, 45 minutes; Part IV, Identification of Structures and Their Functions, 75 minutes; Part V, Laboratory Techniques: (1) Using

the Microscope, (2) Making a Temporary Mount of Frog's Skin, (3) Making a Fresh Mount of Striated Muscle, (4) Dissecting Muscles of a Frog's Hind Leg, (5) Dissecting the Ventral Body Wall of a Frog, (6) Dissecting the Digestive Tract of a Frog, (7) Dissecting the Circulatory System of a Frog, (8) Dissecting the Brain of a Frog, (9) Dissecting the Earthworm; C., a combined test covering three important aspects of elementary zoology, Information, Terminology, and Application of Principles, 2 hours.

5. Cooperative Botany Tests, by F. K. Butters, P. O. Johnson, R. B. Gordon, C. W. Horton, H. C. Sampson, L. H. Tiffany, and others. Part I, Information and Terminology, 90 minutes; Part II, Interpretation of Experiments, 45 minutes; Part III, Application of Principles, 45 minutes; Part IV, Identification of Structures and Their Functions, 75 minutes; Part V, Laboratory Techniques, Using the Microscope; C., a combined test covering three important aspects of elementary botany, Information, Terminology, and Application of Principles, 2 hours.

6. Cooperative Geology Tests, by G. Marshall Kay and others. Historical Geology, 90 minutes; Physical Geology, 90 minutes.

Combinations of Tests Used.—Not all of the tests listed above were given in all participating colleges. While most of the colleges gave the General Culture, English, and Literary Acquaintance tests, and a majority the General Science test, the combinations of tests used in many colleges varied markedly.

Classes Tested.—Nearly all the participating colleges gave one or more of the tests listed to the sophomore class; four colleges gave some of the tests to all students in all four college classes. Twenty-three colleges tested apparently all students in three classes. Seven colleges gave one or more tests to students in at least two classes.

While institutional comparisons are not an important concern of the committee, all colleges were asked to indicate what portion of each class was tested. The answers received are not complete enough to warrant more than a presumption that the pupils tested represent a random sampling of the classes

in most of the participating colleges. These uncertainties regarding the class and institutional representativeness of the groups tested and the various combinations of tests used in each institution should be kept in mind in interpreting the data presented below.

III. SOPHOMORE TEST RESULTS

In this report, the results of the few simple tabulations that have been made will be presented very briefly, with a minimum of interpretation and comment. For the sake of brevity, the tabulations are presented and discussed without reservations regarding the validity of the tests, but the reader should remember throughout that the committee is conscious of the limitations of the tests used.

As already indicated on preceding pages, the detailed analysis of the results of the tests for each college was left to those most conversant with the local situation and those who are, therefore, most able to make useful analyses—the officers in each college. The results of the tests will be valuable to the extent that they are analyzed in the light of local conditions, and to the extent that such analyses are brought to bear upon the fundamental problem of giving to each individual student a more effective type of educational guidance. From this viewpoint, the most important part of this section of the report will be Table I (page 484, since this table will enable each institution to interpret the score of each student on each part of each test in terms of national percentiles. From the viewpoint of the committee, such study of individual students is vastly more important for education than the comparisons of institutions, types of institutions, professional goal groups, and classes, made below. The committee hopes that the large amount of space necessarily taken by even a brief presentation of such comparative data will not raise them in the eyes of the reader from the minor position which they occupy in the committee's whole program.

National Sophomore Percentile Scales.—In consonance with this view, national percentile scales are presented in Table 1. This table will enable each college to determine the

TABLE 1.—National percentile scales for the tests given in April and May, 1934, to college sophomores. The scales are based upon returns from all sophomores tested, regardless of curricular division or type of institution, for whom reports were received up to June 10, 1934. These tables show true percentiles, calculated from the distributions of scores.

Each score in each column shows the upper score limit of the percentile indicated at the extreme left and right of the line. For example, the bottom entry in the History and Social Studies column shows that all scores of 13 or below have a percentile value of 1; all scores from 14 to 17, inclusive, have a percentile value of 2; and all scores above 164 have a percentile value of 100. Many colleges used different combinations of tests, hence the numbers of cases and of colleges vary from column to column. The mean and sigma of the scores and the number of colleges involved in each column are shown at the top of each column.

| | Hist. & S. S. | Por. Lit. | Fine Arts | Total Gen. Cult. | Eng. Usage | Sp. | Voc. | Total Eng. | |
|---------------------|---------------------|--------------|--------------|------------------------|---------------|-------|-------|---------------|-------|
| No. of Cases..... | 5,787 | 5,787 | 5,787 | 5,787 | 6,996 | 6,996 | 6,996 | 6,996 | |
| No. of Colleges.... | 70 | 70 | 70 | 70 | 84 | 84 | 84 | 84 | |
| Mean..... | 72 | 50 | 42 | 164 | 66 | 32 | 48 | 146 | |
| Sigma..... | 33.3 | 28.6 | 28.5 | 78.8 | 17.2 | 12.9 | 18.0 | 41.4 | |
| Percentile | | | | | | | | | %iles |
| 100 | 224 | 215 | 186 | 550 | 110 | 55 | 96 | 245 | 100 |
| 99 | 164 | 139 | 130 | 393 | 97 | 53 | 88 | 228 | 99 |
| 98 | 152 | 122 | 116 | 361 | 95 | 53 | 85 | 222 | 98 |
| 97 | 145 | 113 | 109 | 341 | 94 | 51 | 83 | 218 | 97 |
| 96 | 139 | 107 | 103 | 325 | 93 | 51 | 81 | 215 | 96 |
| 95 | 134 | 103 | 98 | 310 | 92 | 50 | 79 | 212 | 95 |
| 94 | 130 | 99 | 94 | 300 | 91 | 50 | 78 | 209 | 94 |
| 93 | 126 | 96 | 90 | 293 | 90 | 50 | 77 | 207 | 93 |
| 92 | 123 | 94 | 87 | 285 | 89 | 49 | 75 | 204 | 92 |
| 91 | 120 | 91 | 84 | 279 | 88 | 49 | 74 | 202 | 91 |
| 90 | 118 | 89 | 81 | 272 | 88 | 48 | 73 | 201 | 90 |
| 88 | 113 | 84 | 77 | 260 | 86 | 48 | 71 | 197 | 88 |
| 86 | 109 | 80 | 73 | 251 | 85 | 46 | 69 | 193 | 86 |
| 84 | 105 | 77 | 69 | 242 | 84 | 46 | 68 | 190 | 84 |
| 82 | 102 | 74 | 66 | 234 | 83 | 45 | 66 | 187 | 82 |
| 80 | 99 | 71 | 64 | 227 | 81 | 44 | 65 | 184 | 80 |
| 75 | 93 | 66 | 58 | 210 | 79 | 43 | 61 | 178 | 75 |
| 70 | 87 | 61 | 53 | 196 | 76 | 41 | 58 | 171 | 70 |
| 65 | 82 | 56 | 48 | 183 | 74 | 39 | 55 | 164 | 65 |
| 60 | 77 | 52 | 44 | 172 | 71 | 38 | 53 | 159 | 60 |
| 55 | 73 | 48 | 40 | 162 | 69 | 35 | 50 | 153 | 55 |
| 50 | 68 | 45 | 37 | 152 | 67 | 33 | 48 | 147 | 50 |
| 45 | 64 | 42 | 33 | 142 | 64 | 31 | 45 | 142 | 45 |
| 40 | 60 | 38 | 30 | 133 | 62 | 29 | 43 | 136 | 40 |
| 35 | 56 | 35 | 28 | 125 | 60 | 27 | 41 | 129 | 35 |
| 30 | 52 | 32 | 25 | 116 | 57 | 24 | 38 | 123 | 30 |
| 25 | 48 | 29 | 22 | 106 | 54 | 22 | 35 | 117 | 25 |
| 20 | 44 | 26 | 18 | 96 | 50 | 19 | 32 | 110 | 20 |
| 18 | 42 | 25 | 17 | 93 | 49 | 18 | 31 | 106 | 18 |
| 16 | 40 | 23 | 16 | 89 | 48 | 17 | 30 | 103 | 16 |
| 14 | 37 | 21 | 14 | 84 | 46 | 16 | 28 | 99 | 14 |
| 12 | 35 | 20 | 12 | 80 | 44 | 15 | 27 | 94 | 12 |
| 10 | 32 | 18 | 11 | 74 | 42 | 14 | 25 | 90 | 10 |
| 9 | 31 | 17 | 10 | 72 | 41 | 13 | 24 | 88 | 9 |
| 8 | 30 | 16 | 9 | 69 | 39 | 12 | 23 | 85 | 8 |
| 7 | 28 | 14 | 8 | 65 | 38 | 11 | 22 | 82 | 7 |
| 6 | 27 | 13 | 6 | 62 | 37 | 10 | 21 | 79 | 6 |
| 5 | 25 | 12 | 5 | 59 | 35 | 9 | 19 | 76 | 5 |
| 4 | 23 | 10 | 4 | 54 | 34 | 9 | 18 | 72 | 4 |
| 3 | 20 | 9 | 3 | 50 | 31 | 7 | 16 | 67 | 3 |
| 2 | 17 | 6 | 2 | 43 | 29 | 6 | 14 | 59 | 2 |
| 1 | 13 | 3 | 1 | 33 | 23 | 4 | 11 | 50 | 1 |

TABLE I.—*Continued*

| | Lit. Acq. | Cont. Aff. | Gen. Sci. | Gen. Math. | College Grade | |
|----------------------|--------------|---------------|--------------|---------------|------------------|-------|
| No. of Cases..... | 6,484 | 2,619 | 4,271 | 1,361 | 5,636 | |
| No. of Colleges..... | 77 | 36 | 48 | 40 | 78 | |
| Mean..... | 57 | 86 | 51 | 51 | 5.5 | |
| Sigma..... | 26.4 | 41.3 | 30.0 | 26.9 | 1.7 | |
| Percentiles | | | | | | %iles |
| 100 | 164 | 240 | 207 | 145 | 9.0 | 100 |
| 99 | 130 | 198 | 138 | 126 | 9.0 | 99 |
| 98 | 120 | 185 | 123 | 116 | 9.0 | 98 |
| 97 | 114 | 177 | 115 | 109 | 9.0 | 97 |
| 96 | 110 | 168 | 110 | 105 | 8.9 | 96 |
| 95 | 106 | 161 | 106 | 101 | 8.8 | 95 |
| 94 | 103 | 155 | 102 | 99 | 8.7 | 94 |
| 93 | 100 | 151 | 99 | 96 | 8.6 | 93 |
| 92 | 97 | 148 | 95 | 94 | 8.5 | 92 |
| 91 | 95 | 146 | 92 | 92 | 8.4 | 91 |
| 90 | 93 | 143 | 89 | 90 | 8.2 | 90 |
| 88 | 89 | 138 | 85 | 87 | 8.0 | 88 |
| 86 | 86 | 133 | 82 | 83 | 7.9 | 86 |
| 84 | 84 | 128 | 79 | 80 | 7.8 | 84 |
| 82 | 81 | 124 | 76 | 77 | 7.6 | 82 |
| 80 | 78 | 120 | 73 | 73 | 7.5 | 80 |
| 75 | 73 | 113 | 67 | 67 | 7.2 | 75 |
| 70 | 68 | 105 | 62 | 61 | 6.9 | 70 |
| 65 | 64 | 98 | 57 | 57 | 6.7 | 65 |
| 60 | 60 | 92 | 53 | 53 | 6.4 | 60 |
| 55 | 56 | 87 | 50 | 49 | 6.1 | 55 |
| 50 | 53 | 81 | 46 | 46 | 5.9 | 50 |
| 45 | 50 | 75 | 42 | 42 | 5.7 | 45 |
| 40 | 47 | 69 | 39 | 39 | 5.5 | 40 |
| 35 | 44 | 65 | 36 | 36 | 5.3 | 35 |
| 30 | 40 | 60 | 33 | 33 | 5.1 | 30 |
| 25 | 37 | 55 | 29 | 30 | 4.8 | 25 |
| 20 | 33 | 49 | 26 | 27 | 4.5 | 20 |
| 18 | 32 | 47 | 25 | 25 | 4.3 | 18 |
| 16 | 30 | 45 | 23 | 24 | 4.2 | 16 |
| 14 | 29 | 42 | 22 | 23 | 4.1 | 14 |
| 12 | 27 | 39 | 20 | 21 | 3.9 | 12 |
| 10 | 25 | 36 | 19 | 20 | 3.6 | 10 |
| 9 | 24 | 35 | 18 | 19 | 3.5 | 9 |
| 8 | 23 | 33 | 17 | 18 | 3.4 | 8 |
| 7 | 22 | 31 | 16 | 17 | 3.3 | 7 |
| 6 | 21 | 30 | 15 | 16 | 3.1 | 6 |
| 5 | 19 | 28 | 13 | 15 | 3.0 | 5 |
| 4 | 18 | 25 | 12 | 14 | 2.8 | 4 |
| 3 | 16 | 22 | 10 | 13 | 2.5 | 3 |
| 2 | 14 | 19 | 8 | 11 | 2.2 | 2 |
| 1 | 10 | 15 | 5 | 10 | 1.9 | 1 |

national standing of each student who took one or more of the tests. In view of the large differences among colleges, it may be more convenient for purposes of local analysis for each college to construct similar scales based entirely on local returns. This suggestion is made particularly to those colleges whose averages are far from the national average. This table shows national percentile scores for each of the most widely used of the tests given in April and May, 1934.

The data on college grades were obtained from the participating colleges in accordance with the following directions:

"In column 20 please write the average college grade in all subjects. The average grade should be based upon all grades that are on the official records of the registrar's office at the time this form is filled out. This means that the averages will not include grades for the current semester unless the mid-semester marks are available when this form is filled out. It is requested that in reporting the average grade the code given below be used. This code is necessary because different institutions use different symbols for grades, some using letter grades, A-B-C-D-F or E-G-F-P, etc., and some using percentages. In order to maintain comparability as far as possible between the grades for different institutions please transmute whatever system of grades you use into marks of Excellent, Good, Fair, Poor, and Probation. In some institutions only students who receive 95 or above may be considered excellent. In other institutions a student receiving an average of 85 may be considered excellent. The intermediate points in the code, namely, 2, 4, 6, and 8, are provided in order to permit adjustments where there is some doubt regarding the group in which the student's average places him.

| | |
|------------------|---------------------------|
| | 9 Excellent |
| | 8 |
| | 7 Good |
| | 6 |
| Code for Average | 5 Fair |
| College Grades: | 4 |
| | 3 Poor |
| | 2 |
| | 1 Probational or failing" |

Equivalent Scores on 1933 and 1934 Tests.—The 1933 and 1934 forms of the Cooperative tests used in this program were originally made as closely equivalent as possible, but it is almost never possible to secure exact equivalence, regardless of how carefully the tests were originally made. For this reason the successive annual forms of the Cooperative tests are always experimentally checked for equivalence with the forms of the preceding year, and if, as frequently happens, they are found not to be equivalent, tables of equivalent scores are constructed so that comparability may be maintained from

TABLE 2.—Equivalent scores of the 1933 and 1934 General Culture, General Science, English Series 1, and Literary Acquaintance tests. To convert total General Culture scores, convert each of the three part scores, and summate them. Scores on the Spelling section of the 1933 and 1934 English tests are equivalent throughout, hence no table for spelling scores is necessary. Interpolation should be used to convert scores not shown in the table.

| GENERAL CULTURE | | | | | | ENGLISH SERIES 1 | | | | | | | | | |
|-------------------------------|---------|------------------------|---------|----------------|---------|------------------|---------|-------|------|------------|------|-------|------|-----------------------|------|
| I. History and Social Studies | | II. Foreign Literature | | III. Fine Arts | | General Science | | Usage | | Vocabulary | | Total | | Literary Acquaintance | |
| 1933 | 1934 | 1933 | 1934 | 1933 | 1934 | 1933 | 1934 | 1933 | 1934 | 1933 | 1934 | 1933 | 1934 | 1933 | 1934 |
| 268-268 | 295-295 | 240-240 | 270-266 | 110-110 | 100-100 | 265-265 | 200-200 | | | | | | | | |
| 260-259 | 287-287 | 233-234 | 262-259 | 106-107 | 94-100 | 261-261 | 198-194 | | | | | | | | |
| 253-251 | 280-279 | 225-227 | 254-251 | 101-103 | 90-95 | 257-258 | 196-188 | | | | | | | | |
| 246-243 | 273-272 | 217-220 | 246-243 | 98-101 | 86-90 | 252-254 | 193-182 | | | | | | | | |
| 238-234 | 264-264 | 208-212 | 237-235 | 93-97 | 83-86 | 247-250 | 189-176 | | | | | | | | |
| 231-226 | 256-256 | 200-205 | 229-227 | 89-94 | 79-81 | 242-246 | 185-170 | | | | | | | | |
| 223-218 | 248-248 | 192-197 | 221-220 | 86-91 | 76-76 | 237-242 | 181-164 | | | | | | | | |
| 216-210 | 240-241 | 184-189 | 213-212 | 85-89 | 73-72 | 233-238 | 177-158 | | | | | | | | |
| 208-201 | 232-233 | 176-182 | 205-204 | 83-87 | 71-70 | 228-234 | 172-152 | | | | | | | | |
| 202-194 | 224-226 | 168-175 | 197-197 | 80-84 | 69-67 | 223-230 | 166-146 | | | | | | | | |
| 195-186 | 217-218 | 160-167 | 189-189 | 76-80 | 66-64 | 219-226 | 161-140 | | | | | | | | |
| 188-178 | 210-211 | 152-160 | 181-181 | 72-76 | 62-60 | 214-222 | 155-134 | | | | | | | | |
| 180-170 | 202-203 | 144-152 | 173-174 | 69-73 | 58-56 | 209-217 | 149-128 | | | | | | | | |
| 172-162 | 190-190 | 136-145 | 165-166 | 66-70 | 53-51 | 207-213 | 143-122 | | | | | | | | |
| 164-154 | 170-170 | 128-138 | 157-158 | 62-66 | 50-48 | 204-209 | 137-117 | | | | | | | | |
| 156-146 | 150-150 | 120-131 | 150-152 | 59-63 | 46-43 | 203-206 | 131-111 | | | | | | | | |
| 147-137 | 130-130 | 112-124 | 143-145 | 54-58 | 41-38 | 201-204 | 125-105 | | | | | | | | |
| 139-129 | 118-119 | 104-116 | 135-138 | 51-55 | 36-33 | 196-199 | 119-100 | | | | | | | | |
| 131-121 | 110-111 | 96-109 | 127-130 | 48-52 | 31-28 | 194-196 | 113-94 | | | | | | | | |
| 123-113 | 102-104 | 89-101 | 119-122 | 43-47 | 27-24 | 190-192 | 107-88 | | | | | | | | |
| 115-106 | 94-96 | 81-93 | 111-115 | 40-44 | 22-19 | 188-190 | 101-82 | | | | | | | | |
| 108-99 | 86-90 | 75-85 | 103-107 | 36-39 | 17-14 | 185-187 | 97-79 | | | | | | | | |
| 101-93 | 78-82 | 68-77 | 95-98 | 31-34 | 12-10 | 183-185 | 91-74 | | | | | | | | |
| 93-86 | 70-75 | 61-69 | 86-90 | 28-30 | 7-5 | 180-181 | 85-69 | | | | | | | | |
| 86-80 | 62-67 | 54-61 | 78-83 | 23-25 | 2-2 | 178-179 | 81-67 | | | | | | | | |
| 79-73 | 54-59 | 46-53 | 70-77 | 20-22 | 0-0 | 174-174 | 75-61 | | | | | | | | |
| 71-65 | 46-51 | 38-45 | 61-69 | 15-16 | | 170-170 | 71-58 | | | | | | | | |
| 63-58 | 38-43 | 31-37 | 52-61 | 10-11 | | 160-160 | 67-55 | | | | | | | | |
| 55-51 | 31-35 | 24-29 | 44-55 | 6-6 | | 150-150 | 63-52 | | | | | | | | |
| 47-44 | 24-27 | 16-21 | 37-46 | 0-0 | | 140-140 | 59-49 | | | | | | | | |
| 39-36 | 20-20 | 8-13 | 31-37 | | | 120-120 | 53-44 | | | | | | | | |
| 32-30 | 10-10 | 3-4 | 26-29 | | | 100-100 | 47-39 | | | | | | | | |
| 24-22 | 0-0 | 0-0 | 20-21 | | | 80-80 | 41-35 | | | | | | | | |
| 17-16 | | | 12-13 | | | 60-60 | 35-30 | | | | | | | | |
| 9-8 | | | 5-5 | | | 40-40 | 29-25 | | | | | | | | |
| 0-0 | | | 0-0 | | | 20-20 | 23-20 | | | | | | | | |
| | | | | | | 10-10 | 17-15 | | | | | | | | |
| | | | | | | 0-0 | 11-10 | | | | | | | | |
| | | | | | | | 5-5 | | | | | | | | |
| | | | | | | | 0-0 | | | | | | | | |

year to year. Thanks to the cooperation of the University of Minnesota, the University of Louisville, Texas Christian University, and the University of South Carolina, we are enabled to present tables of equivalent scores for the 1933 and 1934 General Culture and General Science tests. From other sources we are able to present a table of equivalent scores for the 1933 and 1934 English Series 1 and Literary Acquaintance

tests. Table 2 will enable any college that used both the 1933 and 1934 tests to compare the students who took the tests in 1933 with those who took the tests in 1934. The equivalence of scores not shown in the table can be calculated by simple interpolation.

Percentile Scales of Foreign Language Tests.—Table 3 shows abbreviated percentile scales for indicated credit groups for each of the four foreign language tests based upon all returns available at the time of writing this report. The numbers of cases are small, and the scales should therefore be used cautiously. It is the hope of the committee that much larger numbers of the foreign language tests will be used in the 1935 program.

Results of Tests in Chemistry, Zoology, and Botany.—The Cooperative tests for college students in chemistry, zoology, and botany became available in time for use in the 1934 program, but they were not available early enough in printed form to allow these science departments in the various colleges to inspect them and choose the tests in accordance with local needs. For this reason only a few of these tests were used. Percentiles for those most frequently used are shown in Table 4. The colleges that did use these tests have registered considerable enthusiasm, and the committee confidently expects that these college science tests will become increasingly prominent features of succeeding testing programs.

Variability of Achievement in Colleges.—The sixteen colleges included in Chart 1 were chosen to represent approximately the whole range of medians from the highest to the lowest, and all types of institutions giving the tests to sophomores and making returns in time for inclusion in this report. The sixteen colleges include universities, four-year colleges, junior colleges, and teachers' colleges in more than a dozen states, and represent various types and conditions of accreditation and non-accreditation. The indications of this chart are adequately summarized by the paragraphs describing the corresponding charts in the report of the 1932 and 1933 programs.

Chart 1 shows two types of variability; the first is the variability of median scores of different colleges, and the sec-

TABLE 3.—Foreign language test percentiles for indicated credit groups. This table is to be read in the same way as Table 1. In view of the small numbers of cases, the percentiles are here given in abbreviated form.

| Years of College Credit. | FRENCH | | | | SPANISH | | | GERMAN | | | LATIN | | | |
|--------------------------|--------|------|------|------|---------|------|------|--------|------|------|-------|------|------|------|
| | 1 | 2 | 3 | 4+ | 1 | 2 | 3+ | 1 | 2 | 3+ | 1 | 2 | 3 | 4+ |
| No. of Cases..... | 537 | 904 | 413 | 109 | 162 | 242 | 62 | 334 | 316 | 65 | 51 | 72 | 134 | 161 |
| No. of Colleges..... | 44 | 44 | 30 | 15 | 24 | 28 | 16 | 29 | 33 | 15 | 10 | 20 | 18 | 17 |
| Mean..... | 89 | 122 | 147 | 192 | 81 | 110 | 150 | 69 | 90 | 162 | 116 | 144 | 153 | 173 |
| Sigma..... | 45.2 | 50.5 | 52.5 | 48.3 | 41.8 | 47.4 | 58.3 | 42.2 | 56.6 | 69.4 | 45.1 | 51.2 | 45.0 | 50.8 |
| Percentiles | | | | | | | | | | | | | | |
| 100 | 238 | 257 | 267 | 271 | 255 | 270 | 267 | 236 | 262 | 260 | 226 | 257 | 257 | 284 |
| 98 | 203 | 224 | 239 | 264 | 193 | 227 | 263 | 196 | 224 | 259 | 224 | 237 | 231 | 262 |
| 93 | 163 | 199 | 221 | 255 | 141 | 187 | 238 | 138 | 187 | 251 | 178 | 224 | 214 | 242 |
| 90 | 145 | 191 | 216 | 247 | 131 | 176 | 227 | 121 | 177 | 247 | 169 | 214 | 207 | 234 |
| 84 | 131 | 177 | 204 | 241 | 115 | 161 | 216 | 103 | 150 | 238 | 158 | 203 | 198 | 223 |
| 80 | 126 | 170 | 195 | 235 | 106 | 150 | 212 | 96 | 141 | 235 | 154 | 189 | 193 | 218 |
| 75 | 118 | 159 | 183 | 228 | 98 | 137 | 198 | 90 | 128 | 223 | 147 | 175 | 186 | 209 |
| 70 | 109 | 151 | 182 | 219 | 94 | 130 | 179 | 84 | 114 | 216 | 144 | 167 | 179 | 203 |
| 60 | 97 | 133 | 166 | 212 | 85 | 114 | 162 | 72 | 94 | 185 | 127 | 158 | 170 | 191 |
| 50 | 84 | 119 | 151 | 201 | 78 | 101 | 140 | 61 | 75 | 166 | 118 | 145 | 159 | 181 |
| 40 | 74 | 106 | 134 | 190 | 69 | 91 | 127 | 53 | 64 | 142 | 107 | 133 | 145 | 164 |
| 30 | 58 | 93 | 112 | 176 | 57 | 81 | 112 | 43 | 50 | 126 | 88 | 124 | 134 | 148 |
| 25 | 52 | 84 | 103 | 160 | 50 | 77 | 107 | 38 | 45 | 96 | 79 | 120 | 122 | 140 |
| 20 | 47 | 76 | 98 | 143 | 44 | 71 | 98 | 34 | 38 | 75 | 76 | 92 | 113 | 126 |
| 16 | 42 | 69 | 92 | 133 | 40 | 67 | 92 | 30 | 33 | 70 | 72 | 86 | 104 | 114 |
| 10 | 35 | 55 | 76 | 117 | 35 | 57 | 83 | 22 | 28 | 60 | 55 | 71 | 84 | 103 |
| 7 | 29 | 48 | 67 | 106 | 27 | 46 | 80 | 19 | 24 | 43 | 51 | 62 | 81 | 95 |
| 3 | 21 | 34 | 50 | 88 | 21 | 35 | 29 | 11 | 14 | 34 | 32 | 55 | 65 | 64 |
| 1 | 13 | 20 | 30 | 80 | 16 | 22 | 3 | 5 | 8 | 31 | 7 | 33 | 46 | 43 |

TABLE 4.—Percentile tables for Chemistry, Zoology, and Botany tests. Because of the small numbers of cases, the percentiles are presented in abbreviated form. This table is to be read in the same manner as Table 1.

| Test | CHEMISTRY C | CHEMISTRY IV | ZOOLOGY C | BOTANY C |
|--------------------|-------------|--------------|-----------|----------|
| No. of Cases..... | 1,124 | 204 | 710 | 155 |
| No. of Colleges... | 31 | 5 | 22 | 10 |
| Mean..... | 131 | 98 | 114 | 92 |
| Sigma..... | 55.5 | 52.5 | 44.8 | 38.7 |
| Percentiles | | | | %iles |
| 100 | 319 | 244 | 279 | 229 |
| 98 | 253 | 218 | 214 | 182 |
| 93 | 222 | 194 | 183 | 150 |
| 90 | 211 | 173 | 173 | 144 |
| 84 | 188 | 151 | 160 | 135 |
| 80 | 178 | 140 | 153 | 123 |
| 75 | 167 | 127 | 145 | 114 |
| 70 | 157 | 121 | 137 | 108 |
| 60 | 140 | 107 | 122 | 98 |
| 50 | 123 | 92 | 110 | 88 |
| 40 | 110 | 77 | 97 | 78 |
| 30 | 95 | 61 | 85 | 70 |
| 25 | 87 | 56 | 81 | 66 |
| 20 | 81 | 51 | 75 | 60 |
| 16 | 75 | 46 | 70 | 55 |
| 10 | 64 | 35 | 61 | 43 |
| 7 | 55 | 29 | 53 | 39 |
| 3 | 42 | 21 | 43 | 29 |
| 1 | 32 | 12 | 36 | 25 |

ond is the more significant variability of scores of students in individual colleges. While both types of variability indicate the great need for more adequate educational guidance of students, both before and after they reach college, the second type more particularly defines the immediate opportunity of the colleges to serve those young people who have already been admitted, and also, in cooperation with the secondary schools, to serve similar groups of young people who are planning to come to college.

The differences among the colleges whose sophomores participated in this program, as indicated by the differences displayed on Chart 1, are very large indeed, so far as achievement in spelling, usage, and vocabulary is concerned. Similar charts for the General Culture, General Science, and General Mathematics tests, which are omitted from this report to save space, indicate equally large differences in each of these fields.

Chart 1 is particularly interesting because of the availability of comparable English test data on entering college freshmen and on independent secondary school pupils, represented by the five bars at the extreme right of the chart. The median score of 3,268 college entrants in 10 colleges in September, 1932, and the medians of 1,778 twelfth grade pupils in independent secondary schools are slightly above the national sophomore median. The sophomore class medians on the English test are below the median of the ninth grade in three colleges and below the median of the tenth grade in eleven of the participating colleges. In one of these colleges, about 85 per cent of the sophomores are below the tenth grade median. In the college which secured the highest median score in the English test, about 15 per cent of the sophomores are below the twelfth grade median.

Variability within Colleges.—These relations are of considerable portent for both the philosophy and practice of educational guidance throughout secondary school and college. In Chart 1 we are concerned with basic aspects of the native language. The spread of scores within a single college, from far below the ninth grade median of independent secondary schools to far above the national sophomore median, is of

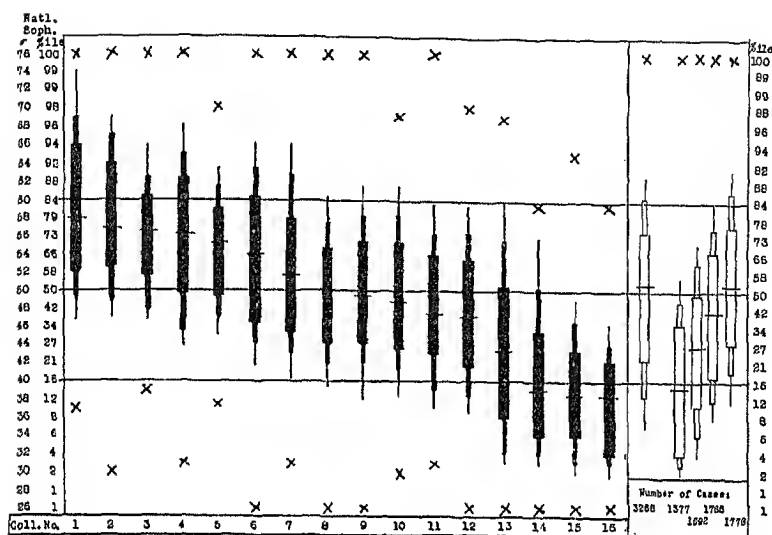


CHART 1.—Variability of achievement in participating colleges as measured by the English test.

The middle horizontal line shows the national median, and the other two are at the 16th and 84th percentiles of the national sophomore distribution. The percentile scale at the left is based on returns for 6,996 sophomores from 24 colleges that took this test, and reported results in time for inclusion in the percentile table. Each bar represents an individual college. The wide portion of each bar represents the range of scores of the middle half of the sophomores in each college. The narrow parts extend to the 16th and 84th percentiles in each college. The lines at the end extend down to the 10th percentile and up to the 90th percentile. The cross below the bars represent the lowest scores and those above represent the highest scores in the several colleges. The short cross line near the middle of each bar represents the median score of the college.

While this chart is based entirely on percentiles, the scale has been altered to correspond roughly to a sigma scale, so that vertical distances are approximately comparable. The sigma scale is derived from the percentile scale.

The sixteen colleges included here are chosen to represent approximately the whole range of averages of the colleges that gave the English test. All types of institutions are represented. The numbers of cases vary from 40 to 275.

basic significance. If these indications are no more than approximately correct, the great need suggested is not so much a more ardent concern over the rectification of institutional standards as a humane ardor for finding and serving the needs of individuals in the heterogeneous and largely over-

lapping masses that now populate both secondary schools and colleges. It is obvious that, with such student bodies as here indicated, mass standards and "average performance" are not only irrelevant but ironical. It seems equally obvious that no simple and easy changes can be remotely adequate for making the readjustment demanded by the heterogeneity here exposed. Nothing short of a definite abandonment and repudia-

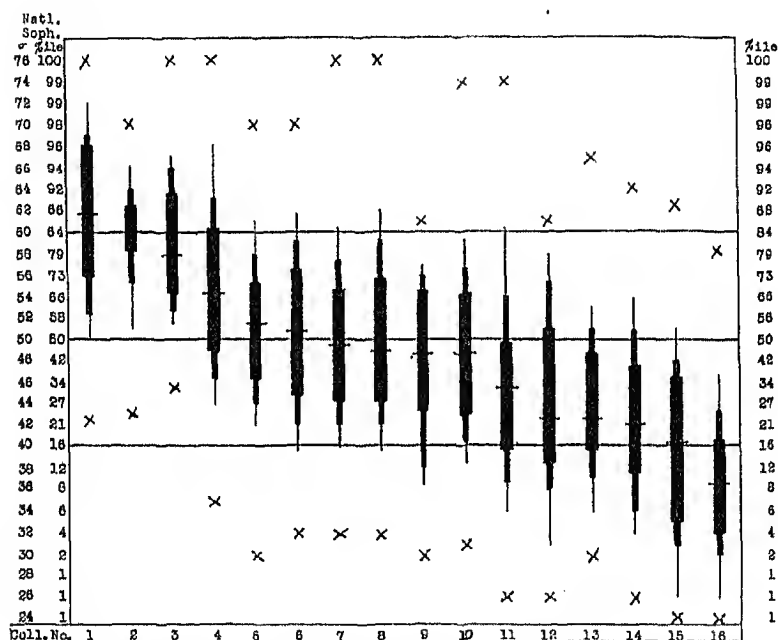


CHART 2.—Variability of achievement in participating colleges as measured by the Contemporary Affairs test. This chart parallels Chart 1, and is to be read in the same manner.

tion of blanket prescriptions and unmitigated mass standards, and a genuine and wholehearted acceptance of the fact of individual differences and their increasingly obvious administrative and guidance implications, would seem to be a sufficient reason for hopefulness in regard to this crucial social problem.

Contemporary Affairs Test.—Chart 2 shows that the colleges are as variable with regard to acquaintance with con-

temporary affairs as they are with regard to achievement in English, General Culture, science, and foreign languages. The range of college averages in terms of national percentiles is greater in Contemporary Affairs than in English, and the spread of scores within colleges is approximately the same in Contemporary Affairs as in English. Five of the colleges in Chart 2 also appear on Chart 1. In general, there is positive correlation between standing on the English and on the Contemporary Affairs test, but there is at least one interesting reversal. Colleges 6 and 8 on Chart 2 are practically

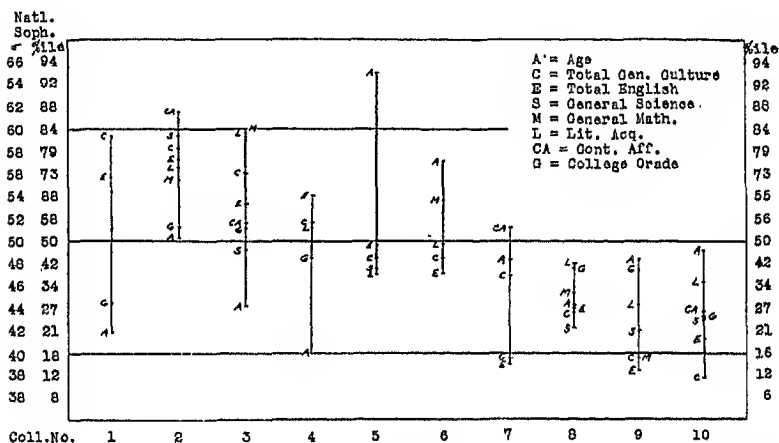


CHART 3.—Variability of college averages on different tests. College means are here graphed in terms of national sophomore percentiles, the scale being arranged as in Chart 1.

equal on the Contemporary Affairs test, but in Chart 1 these two colleges appear as numbers 15 and 11 respectively. Although more than 80 per cent of the sophomores in College 15, Chart 1, are below the average of College 11, Chart 1, the former, College 6, Chart 2, is slightly above the latter, College 8, Chart 2, on Contemporary Affairs. This difference indicates a considerable difference in curricular and/or extra-curricular influences brought to bear upon students in these two institutions.

Variability of College Averages on Different Tests.—Chart

3 illustrates graphically how relative standing in a given college varies from one variable to another. The colleges are arranged from left to right in the order of their average scores on the General Culture test. In colleges 3 and 4, relatively, the sophomores are young and secure low average college grades, but are high on one or more of the sophomore tests. College 2 is only slightly above College 3 in General Culture, but is much higher in Contemporary Affairs; College 3 is far above College 7 in General Culture but is barely equal to College 7 in Contemporary Affairs. College 2 is much higher than College 3 in General Science, but is somewhat lower in General Mathematics, in which College 2 barely exceeds College 6. At the right, the colleges with mediocre or very low test averages show relatively high chronological age averages. In College 1 the average college grade assigned to the sophomores is lower than in all other colleges except numbers 7 and 10. Such differences in grading standards indicate the importance of comparable measures for transfer and admission no less than for guidance purposes.

Some of the test differences found in Chart 3 suggest the desirability of detailed analysis of local test results in each participating college.

Distributions of College Averages.—Table 5 confirms for all variables the indications of Charts 1 and 2 that colleges differ widely with respect to achievement of the types measured by the tests. On some of the tests, several colleges secure mean scores which are at or above the 84th percentile, while equal numbers of colleges secure mean scores at or below the 16th percentile. This means that in some colleges roughly half of the sophomores are in the highest 16 per cent of the national sophomore group, and in other colleges roughly half of the sophomores are in the lowest 16 per cent of the national sophomore group. Such differences, in conjunction with variable grading standards (Chart 3), signify much for admissions officers who are considering applications for advanced standing, and for those who are engaged in constructive educational guidance. These data emphasize the need for supplementing present appraising devices with in-

TABLE 5.—Distributions of college sophomore averages. The sophomore means of all colleges for which data were available are here distributed in terms of national sophomore percentiles. The percentile scale has been altered as in Chart I, so that the intervals correspond approximately to a sigma scale. The vertical distances are therefore roughly comparable.

| Natl. Soph. %iles | Age | Hist. & S. S. | For. Lit. | Fine Arts | Total Gen. Cult. | Eng. Usage | Spell. | Voc. | Total Eng. | Lit. Acq. | Cont. Aff. | Gen. Sci. | Gen. Math. | Coll. Grade | Natl. Soph. %iles |
|-------------------|-----|---------------|-----------|-----------|------------------|------------|--------|------|------------|-----------|------------|-----------|------------|-------------|-------------------|
| 98-100 | | | | | | | | | | | | | | | 98-100 |
| 96-97 | | | | | | | | | | | | | | | 96-97 |
| 94-95 | 2 | | | 1 | | | | | | | | | | | 94-95 |
| 92-93 | | | | 1 | | | | | | | | | 1 | | 92-93 |
| 88-91 | 1 | | 4 | 1 | | | | | | | | | 2 | | 88-91 |
| 84-87 | | | | 3 | | | | 1 | | 1 | 3 | 1 | | | 84-87 |
| 79-83 | 2 | | | | | | | | | | | | | | 79-83 |
| 73-78 | 2 | 1 | 1 | 3 | 4 | 1 | | 1 | 6 | 5 | 2 | 3 | 6 | 2 | 73-78 |
| 66-72 | 4 | 3 | 7 | 6 | 7 | 3 | | 4 | 10 | 6 | 1 | 1 | 2 | 1 | 66-72 |
| 58-65 | 10 | 6 | 11 | 9 | 8 | 12 | 3 | 8 | 10 | 11 | 2 | 9 | 7 | 9 | 58-65 |
| 50-57 | 14 | 13 | 13 | 10 | 17 | 15 | 15 | 17 | 13 | 9 | 15 | 7 | 3 | 15 | 50-57 |
| 42-49 | 18 | 17 | 10 | 10 | 6 | 20 | 24 | 20 | 17 | 10 | 4 | 10 | 3 | 15 | 42-49 |
| 34-41 | 11 | 8 | 10 | 9 | 12 | 12 | 18 | 15 | 15 | 10 | 3 | 4 | 5 | 18 | 34-41 |
| 27-33 | 11 | 5 | 4 | 7 | 3 | 4 | 10 | 5 | 6 | 4 | 4 | 5 | 2 | 12 | 27-33 |
| 21-26 | 11 | 3 | 3 | 3 | 3 | 9 | 1 | 3 | 3 | 1 | 2 | 3 | 1 | 4 | 21-26 |
| 16-20 | 9 | 1 | 1 | 3 | 1 | 3 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 16-20 |
| 12-15 | 2 | | 1 | 1 | 2 | 2 | | 4 | 2 | 1 | | | 1 | 4 | 12-15 |
| 8-11 | | 2 | | | 1 | | | | | | | | | 1 | 8-11 |
| 6-7 | 1 | | | | | | | | | | | | | | 6-7 |
| 4-5 | | | | | | | | | | | | | | | 4-5 |
| 2-3 | 1 | | | | | | | | | | | | | | 2-3 |
| 1 | | | | | | | | | | | | | | | 1 |
| Total..... | 99 | 74 | 74 | 74 | 74 | 88 | 88 | 88 | 88 | 79 | 39 | 51 | 42 | 82 | |

TABLE 6.—Distributions of college averages on the foreign language tests for indicated college credit groups. In computing college credits, one high school year was considered equivalent to one-half college year of credit. The numbers of cases on which the college averages are based range from 1 to 92; if all averages based on fewer than 5, or even 10, cases had been excluded, the relations indicated in this table would not be noticeably different. In the French test columns, the dotted lines indicate tenth, eleventh, and twelfth grade independent secondary school medians, and the dash lines indicate medians of entering college freshman groups that had had two, three, or four years of high school French.

The table is to be read as follows: In the 1-1½ year column for French, one college secured an average score between 200 and 210; one college secured an average between 180 and 190; and so on to the bottom of the column where it appears that three colleges secured averages of between 20 and 30 score points. Referring to the dotted horizontal line, it appears that in most of the colleges the 1-1½ year college credit groups secured averages below the tenth grade median in a group of highly selected independent secondary schools, while more than half averaged below the dash line, or below the average of entering college freshmen who had had two years of high school French.

The vertical brackets at the right of each distribution indicate the 25th, 50th, and 75th percentiles from Table 2.

| | FRENCH | | | | GERMAN | | | SPANISH | | | LATIN | | | | | |
|----------------|-------------------------|------|------|----|--------|------|----|---------|------|----|-------|------|------|----|-----|-------|
| Score | Years of College Credit | | | | | | | | | | | | | | | Score |
| | 1-1½ | 2-2½ | 3-3½ | 4+ | 1-1½ | 2-2½ | 3+ | 1-1½ | 2-2½ | 3+ | 1-1½ | 2-2½ | 3-3½ | 4+ | | |
| 260 | | | | | | | | | | | | | | | 260 | |
| 250 | | | | | | | | | | | | | | | 250 | |
| 240 | | | | | | | | | | | | | | | 240 | |
| 230 | | | | | | | | | | | | | | | 230 | |
| 220 | | | | | | | | | | | | | | | 220 | |
| 210 | | | | | | | | | | | | | | | 210 | |
| 200 | | | | | | | | | | | | | | | 200 | |
| 190 | | | | | | | | | | | | | | | 190 | |
| 180 | | | | | | | | | | | | | | | 180 | |
| 170 | | | | | | | | | | | | | | | 170 | |
| 160 | | | | | | | | | | | | | | | 160 | |
| 150 | | | | | | | | | | | | | | | 150 | |
| 140 | | | | | | | | | | | | | | | 140 | |
| 130 | | | | | | | | | | | | | | | 130 | |
| 120 | | | | | | | | | | | | | | | 120 | |
| 110 | | | | | | | | | | | | | | | 110 | |
| 100 | | | | | | | | | | | | | | | 100 | |
| 90 | | | | | | | | | | | | | | | 90 | |
| 80 | | | | | | | | | | | | | | | 80 | |
| 70 | | | | | | | | | | | | | | | 70 | |
| 60 | | | | | | | | | | | | | | | 60 | |
| 50 | | | | | | | | | | | | | | | 50 | |
| 40 | | | | | | | | | | | | | | | 40 | |
| 30 | | | | | | | | | | | | | | | 30 | |
| 20 | | | | | | | | | | | | | | | 20 | |
| 10 | | | | | | | | | | | | | | | 10 | |
| Total Colleges | 46 | 47 | 32 | 15 | 32 | 35 | 16 | 25 | 28 | 16 | 10 | 21 | 19 | 18 | | |

struments which yield more objective and more comparable measures.

Comparison of College Averages on the Foreign Language Tests.—Table 6 shows distributions of college averages on each of the foreign language tests for indicated college credit groups. The numbers of cases on which the averages actually included in the table are based are quite small, ranging from 1 to 90 or more, but since the averages (or single scores, as

the case may be) represent the tested achievement of groups or of individuals officially placed in defined credit groups by the colleges, Table 5 seems to afford significant evidence on the variable meaning of college credits in the foreign languages.

It is apparent that even in a sequential subject-matter like French, groups that are officially equal in training or credit status are extremely variable in tested achievement. The distributions of college averages for the three credit groups overlap approximately in the same way and to the same extent as distributions of individual scores for successive credit groups or classes in a single institution. In several colleges the three-year groups are below the two-year average, and in several colleges the two-year groups are above the three-year average. In a few colleges the average for third-year students was below the average for second-year students in the same college. The positions of the dotted and dashed lines in the French test columns afford eloquent comparisons of achievement in the foreign languages in colleges and highly selected secondary schools. The dash lines show averages of entering college freshmen, mostly from public high schools, who had had 2, 3, and 4 years of high school French. These entering freshmen took the Cooperative French test as a placement test in September, 1932, in 7 colleges. These 7 colleges probably attract superior students, but, even so, it is not without significance that the 2, 3, and 4-year *high school* credit groups secure averages close to or above those of the 1-1½, 2-2½, and 3-3½ year *college* credit groups, respectively. In more than half the colleges the 1-1½ year college credit groups secure averages below, and in several far below, the 2-year high school credit group of entering freshmen; five out of 47 colleges in the 2-2½ year college credit group secure averages above the 3-year high school credit group; and only one college in the 3-3½ year college credit group has an average above the 4-year high school credit group. The dotted lines, representing the tenth, eleventh, and twelfth grade class averages in independent secondary schools, are all above the averages of the corresponding college credit groups.

Comparison of Professional Goal Groups.—Chart 4 shows graphically indicated test averages of sophomores grouped according to their reported professional goals. In order to avoid a multiplicity of lines in the chart, the averages of three groups, Business, Teaching, and Agriculture, are omitted. The averages of the Business and Teaching groups on all variables are at or near the national median; the number of cases in the agriculture group is too small to be significant.

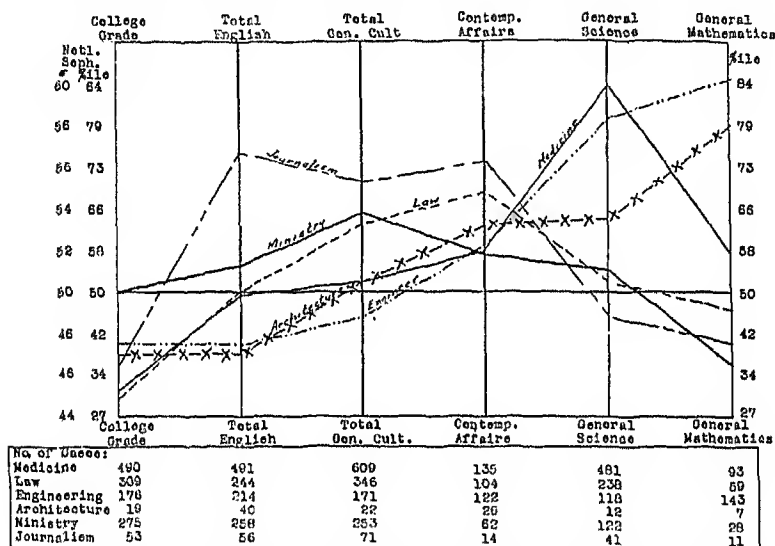


CHART 4.—Comparison of professional goal groups. Graphs of means on indicated tests of college sophomores who reported their professional goals. The averages are graphed in terms of national sophomore percentiles arranged as in Chart 1.

Chart 4 affords several interesting contrasts. In general, the medicine, engineering, and architecture aspirants are relatively high in science and mathematics, and low in English, General Culture, and Contemporary Affairs; while the journalism, law, and ministry groups are low in science and mathematics, and high (with minor exceptions) in the other tests. The pre-journalists take highest place in English, General Culture, and Contemporary Affairs. The ministry group takes highest place in average college grade, second highest place in English and General Culture, and lowest place in Contem-

porary Affairs and mathematics. All pre-professional groups except the ministerial secure relatively low average college grades.

All pupils in each professional group that took the indicated tests are included in this chart. Since some colleges did not use some of the tests, the numbers of cases vary from test to test. For this reason the indications should be interpreted with cautious reservations.

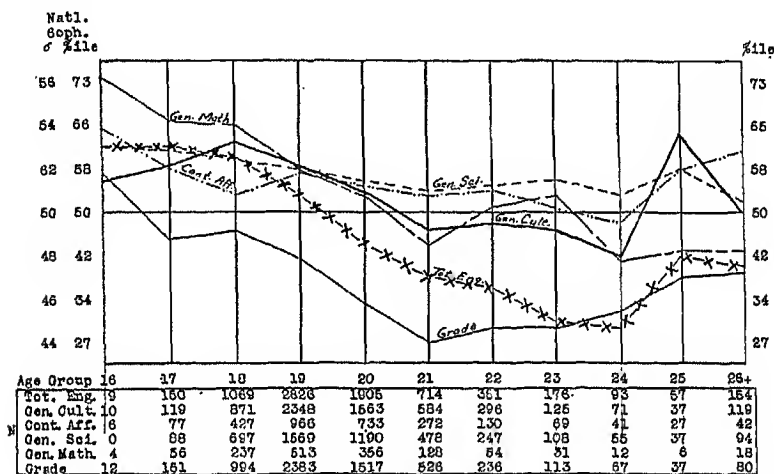


CHART 5.—Comparison of age groups. Means of chronological age groups of sophomores on indicated variables, graphed in terms of national sophomore percentiles arranged as in Chart 1. Since the national distributions show varying degrees of positive and negative skewness, the means as here graphed appear too high for some variables and too low for others. However, it is the direction of the lines, rather than their height on the chart, that is significant here.

Comparison of Age Groups.—Chart 5 shows the familiar negative correlation between chronological age and tested achievement. The negative correlation is fairly consistent for all variables from age 17 to 24, after which the relation becomes slightly positive; but the relation between age and average scores in General Science and General Mathematics is not far from zero throughout.

In Chart 5 means are graphed in terms of national percentiles, and since the national distributions show varying degrees of positive and negative skewness, the lines connecting

the averages of the different tests are rather widely separated, some appearing too high and some too low, according to the degree and direction of skewness. Similar but less obvious discrepancies appear in some of the other charts. Throughout this report an effort has been made to make all comparisons in terms of national sophomore percentiles, partly because of the more widespread familiarity with the percentile scale, and partly because of the lesser expense of preparing the report in this way. In calculating the averages of sub-

TABLE 7.—Correlations between 1933 and 1934 sophomore averages of colleges that participated in both programs, with corresponding correlations for 1932-1933. Data on some of the variables were not available for all colleges.

| Variable | N (No. of Pairs of College Averages) | Correlations 1933-1934 | Corresponding Correlations 1932-1933 |
|---------------------------------|--------------------------------------|------------------------|--------------------------------------|
| Chronological Age..... | 71 | 0.85 | 0.82 |
| College Grade..... | 64 | 0.51 | 0.44 |
| Tests: | | | |
| History and Social Studies..... | 61 | 0.83 | 0.65 |
| Foreign Literature..... | 61 | 0.91 | 0.54 |
| Fine Arts..... | 61 | 0.90 | 0.68 |
| Total General Culture..... | 61 | 0.90 | |
| Usage..... | 66 | 0.76 | |
| Spelling..... | 66 | 0.74 | |
| Vocabulary..... | 66 | 0.77 | |
| Total English..... | 66 | 0.79 | 0.68 |
| Literary Acquaintance..... | 65 | 0.74 | |
| General Science..... | 39 | 0.83 | 0.55 |
| General Mathematics..... | 33 | 0.65 | |

groups, as of a college, or an age or professional group, it has been less expensive and more expeditious to calculate means rather than medians, hence the unusual procedure of charting and tabulating means in terms of percentiles, arranged to approximate a sigma scale, as in Chart 1. However, the apparent distortion would have been as great if we had derived percentile from sigma scales, instead of the reverse; and for those who may wish to make more exact statistical analyses, the national means and sigmas for each variable are given in Tables 1 and 2.

Comparison of Men and Women Sophomores.—The men and women sophomores who took the tests are equal in only one of the tests, General Culture. The women are slightly superior on the average in college grade and English, slightly inferior in Contemporary Affairs, and nearly two sigmas inferior in General Science and General Mathematics.

Relations between 1933 and 1934 Standings of Colleges That Participated in Both Programs.—The fact that 70-odd colleges participated in both the 1933 and 1934 programs makes possible some very interesting comparisons of the relative standings of the 1933 and 1934 sophomore classes in these colleges. The relations are summarized in terms of correlations in Table 7.

The correlation coefficients for 1933-1934 standings are all much higher than corresponding coefficients for 1932-1933 (see EDUCATIONAL RECORD, October, 1933), with the single exception of the correlation coefficient of average chronological age, which is about the same (0.85 as against 0.82). The higher coefficients are probably due mainly to the fact that the tests used in 1933-1934 are much more closely parallel in content and structure than the two sets of tests used in 1932 and 1933. The tests used in 1932 were the Pennsylvania Study tests constructed by the Carnegie Foundation, while those used in 1933 and 1934 were successive annual forms of the Cooperative tests, constructed by the same authors in accordance with the same structural plan and content outline.

The lowest correlation coefficient is that for average college grade, as in 1932-1933.

IV. COMPARISON OF COLLEGE CLASSES

College Class Percentiles.—From some points of view the most interesting and significant data yielded by the 1934 testing program are those which enable us to compare two or more classes in the same college or group of colleges. About two dozen colleges tested significant numbers of students in at least two classes, but only four colleges tested students in all

TABLE 8.—Freshman, sophomore, junior, and senior class percentiles based on all returns from four colleges that gave the tests to all four classes.

| Test | Total General Culture | | | | Total English | | | | Literary Acquaintance | | | | Percentiles |
|-------------------|-----------------------|-------|--------|--------|---------------|-------|--------|--------|-----------------------|-------|--------|--------|-------------|
| | Fresh. | Soph. | Junior | Senior | Fresh. | Soph. | Junior | Senior | Fresh. | Soph. | Junior | Senior | |
| No. of Cases..... | 431 | 327 | 235 | 157 | 241 | 221 | 159 | 100 | 243 | 218 | 159 | 100 | 100 |
| Mean..... | 155 | 165 | 187 | 198 | 140 | 154 | 162 | 151 | 51 | 56 | 64 | 57 | 98 |
| Sigma..... | 81.3 | 85.9 | 95.1 | 97.9 | 43.9 | 39.1 | 40.8 | 44.3 | 23.8 | 25.4 | 28.8 | 25.5 | 93 |
| Class..... | Fresh. | Soph. | Junior | Senior | Fresh. | Soph. | Junior | Senior | Fresh. | Soph. | Junior | Senior | 90 |
| Percentiles | | | | | | | | | | | | | 84 |
| 100 | 424 | 518 | 479 | 626 | 239 | 241 | 250 | 244 | 127 | 143 | 137 | 154 | 100 |
| 98 | 366 | 392 | 416 | 488 | 218 | 230 | 229 | 237 | 109 | 112 | 125 | 131 | 98 |
| 93 | 294 | 305 | 347 | 350 | 201 | 207 | 217 | 209 | 91 | 99 | 109 | 90 | 93 |
| 90 | 266 | 280 | 321 | 316 | 194 | 203 | 209 | 207 | 86 | 94 | 105 | 85 | 90 |
| 84 | 242 | 247 | 282 | 279 | 189 | 197 | 202 | 195 | 78 | 84 | 93 | 79 | 84 |
| 80 | 218 | 236 | 268 | 264 | 183 | 190 | 199 | 190 | 73 | 79 | 89 | 75 | 80 |
| 75 | 199 | 217 | 241 | 239 | 176 | 181 | 195 | 186 | 66 | 74 | 87 | 71 | 75 |
| 70 | 186 | 197 | 228 | 227 | 170 | 177 | 191 | 179 | 62 | 68 | 79 | 67 | 70 |
| 60 | 161 | 167 | 206 | 206 | 157 | 167 | 180 | 170 | 55 | 57 | 72 | 60 | 60 |
| 50 | 140 | 147 | 168 | 184 | 141 | 156 | 165 | 158 | 49 | 53 | 63 | 54 | 50 |
| 40 | 119 | 130 | 145 | 163 | 126 | 144 | 154 | 136 | 43 | 47 | 56 | 47 | 40 |
| 30 | 102 | 109 | 126 | 140 | 113 | 131 | 142 | 123 | 36 | 39 | 48 | 42 | 30 |
| 25 | 94 | 101 | 113 | 124 | 108 | 128 | 136 | 119 | 31 | 37 | 41 | 39 | 25 |
| 20 | 85 | 92 | 101 | 114 | 101 | 123 | 129 | 111 | 30 | 34 | 35 | 37 | 20 |
| 16 | 78 | 83 | 91 | 108 | 96 | 116 | 114 | 103 | 28 | 31 | 31 | 33 | 16 |
| 10 | 63 | 67 | 74 | 94 | 82 | 104 | 101 | 99 | 24 | 28 | 26 | 30 | 10 |
| 7 | 55 | 61 | 67 | 84 | 74 | 90 | 99 | 93 | 21 | 23 | 23 | 26 | 7 |
| 3 | 41 | 48 | 54 | 69 | 52 | 79 | 74 | 69 | 14 | 18 | 17 | 22 | 3 |
| 1 | 28 | 36 | 44 | 61 | 36 | 58 | 64 | 52 | 9 | 15 | 13 | 14 | 1 |

TABLE 8.—Continued

| Test | Contemporary Affairs | | | | General Science | | | | General Mathematics | | | | %iles 100 98 93 90 84 80 75 70 60 50 40 30 25 20 16 10 7 3 1 |
|-------------------|----------------------|-------|--------|--------|-----------------|-------|--------|--------|---------------------|-------|--------|--------|-----------------------------------------------------------------------------------------------------------------------|
| | Fresh. | Soph. | Junior | Senior | Fresh. | Soph. | Junior | Senior | Fresh. | Soph. | Junior | Senior | |
| No. of Cases..... | 324 | 189 | 156 | 101 | 205 | 136 | 48 | 38 | 121 | 58 | 45 | 32 | |
| Mean..... | 86 | 95 | 100 | 104 | 37 | 46 | 56 | 54 | 39 | 50 | 47 | 47 | |
| Sigma..... | 41.2 | 39.8 | 44.9 | 43.0 | 24.6 | 22.7 | 24.7 | 20.6 | 19.4 | 21.7 | 19.5 | 21.5 | |
| Class..... | Fresh. | Soph. | Junior | Senior | Fresh. | Soph. | Junior | Senior | Fresh. | Soph. | Junior | Senior | |
| Percentiles | | | | | | | | | | | | | |
| 100 | 234 | 200 | 215 | 223 | 131 | 106 | 140 | 97 | 106 | 99 | 96 | 87 | |
| 98 | 170 | 181 | 204 | 205 | 100 | 97 | 140 | 97 | 87 | 92 | 96 | 87 | |
| 93 | 155 | 155 | 170 | 168 | 75 | 83 | 87 | 88 | 74 | 83 | 71 | 79 | |
| 90 | 148 | 150 | 159 | 153 | 67 | 79 | 85 | 83 | 64 | 82 | 71 | 77 | |
| 84 | 128 | 139 | 149 | 139 | 63 | 73 | 76 | 73 | 58 | 72 | 68 | 70 | |
| 80 | 120 | 132 | 144 | 131 | 57 | 67 | 75 | 69 | 53 | 69 | 66 | 66 | |
| 75 | 115 | 126 | 133 | 128 | 50 | 64 | 75 | 67 | 51 | 68 | 56 | 63 | |
| 70 | 103 | 116 | 123 | 121 | 46 | 58 | 73 | 64 | 48 | 66 | 54 | 60 | |
| 60 | 89 | 105 | 109 | 113 | 38 | 49 | 63 | 58 | 39 | 57 | 51 | 55 | |
| 50 | 80 | 92 | 96 | 105 | 31 | 42 | 51 | 57 | 36 | 49 | 46 | 50 | |
| 40 | 69 | 82 | 88 | 94 | 27 | 37 | 46 | 50 | 31 | 45 | 44 | 38 | |
| 30 | 62 | 71 | 76 | 87 | 21 | 31 | 38 | 40 | 28 | 38 | 33 | 35 | |
| 25 | 56 | 67 | 66 | 74 | 19 | 29 | 37 | 38 | 25 | 34 | 31 | 33 | |
| 20 | 50 | 58 | 57 | 68 | 16 | 26 | 35 | 29 | 23 | 28 | 27 | 25 | |
| 16 | 45 | 55 | 50 | 65 | 13 | 22 | 30 | 28 | 21 | 25 | 27 | 21 | |
| 10 | 34 | 44 | 42 | 51 | 9 | 20 | 26 | 23 | 18 | 18 | 24 | 16 | |
| 7 | 32 | 40 | 35 | 44 | 8 | 16 | 25 | 22 | 15 | 18 | 24 | 16 | |
| 3 | 20 | 30 | 26 | 30 | 4 | 12 | 17 | 21 | 13 | 13 | 17 | 10 | |
| 1 | 14 | 19 | 21 | 18 | 2 | 6 | 17 | 18 | 12 | 11 | 8 | 10 | |

four classes. Abbreviated percentiles for the consolidated classes in these colleges are shown in Table 8. These percentiles are given for their general interest and to enable these colleges to study their individual students in the four classes in terms of their own class percentiles. The small numbers of colleges and cases involved in Table 8 make these percentiles less significant than those in Table 1, but they may be of service in special studies undertaken in the colleges that have made this interesting table possible. The committee suggests

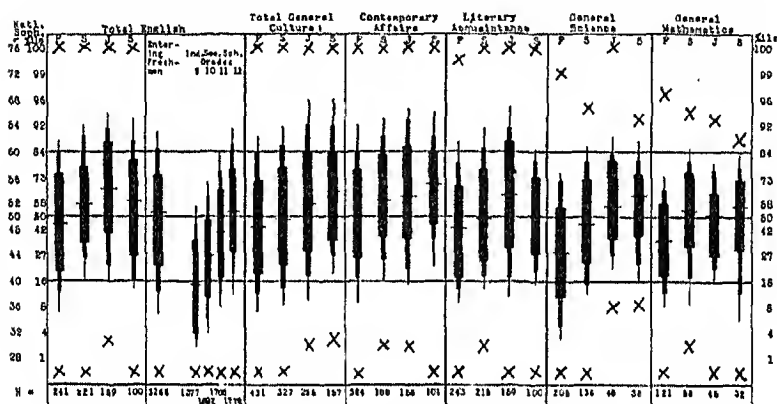


CHART 6.—Comparison of college classes. Graphs of scores on indicated tests of freshmen, sophomores, juniors, and seniors in the four colleges that tested all four classes. The class percentiles are graphed in terms of national sophomore percentiles arranged as in Chart 1. All available cases on each test have been included. Varying numbers of the four colleges either omitted or made optional the General Science and General Mathematics tests in one or more of the classes; hence the indications from these tests should be taken with caution.

For comparative purposes, the distributions of comparable English test scores of entering college freshmen and of ninth, tenth, eleventh, and twelfth grade classes in independent secondary schools are graphed beside the English test graphs of the college classes. (Cf. Chart 1.)

that larger numbers of colleges test all four classes in the 1935 program.

Overlapping of College Classes.—The overlapping of college classes indicated in Table 8 is shown graphically in Chart 6. In general, the class medians rise from freshmen to senior classes, except that the senior medians in English and Literary Acquaintance are lower than the junior medians, and

in General Mathematics the junior median is slightly lower than the sophomore median. On the English test, the senior median recedes from the junior median less than on any other test, but even this slight recession is in strong contrast with the large advance made by the twelfth over the eleventh grade in independent secondary schools.

Of far greater significance, however, is the fact that even the largest differences in medians are small in comparison with the variability of the classes, and the further fact that the variability is approximately equal in all classes. In a basic subject matter such as English there are about as many very good students in the freshman as in the senior class, and nearly as many very poor students in the senior as in the freshman class. The near-equality of the class medians might appear acceptable if the senior distribution were truncated at the bottom. The presence in the senior class as in the freshman class of nearly the same proportion of students below the tenth grade median for independent schools is enough to give one pause; and the fact can hardly be explained except on the grounds that time-serving rather than achievement furnishes the basis of promotion from freshman to senior class. It is more than probable that these students achieve social and some intellectual values in passing from the freshman to the senior class; but it seems clear that whatever the nature of these values may be, they are not dependent upon the type of literacy measured by the English test used in this program. Nearly a third of the college seniors in these five colleges are below the median of the freshmen, more than a third of the seniors are below the twelfth grade independent school median, about a fourth of the college seniors are below the tenth grade median, and nearly ten per cent are below the ninth grade median.

Comparison of Class Averages of All Colleges That Tested Two or More Classes.—The averages on the English, General Culture, and Contemporary Affairs tests of the individual colleges in Chart 6, and of one or two other colleges that tested three classes, are shown graphically in Chart 7. The averages of most of these colleges rise from freshman to senior classes,

but there are two large reversals on the Contemporary Affairs test, and at least one large reversal on the English test. But in none of these colleges are the differences between the averages large in comparison with the variability within classes displayed in Chart 6, or in comparison with the differences between corresponding class averages in different colleges.

The evidence from all these tests, as summarized in all



CHART 7.—Graphs of class averages on the English, General Culture, and Contemporary Affairs tests of individual colleges that tested three or four classes. The college class means are graphed in terms of national sophomore percentiles, arranged as in Chart 1. The identification numbers of the colleges are arbitrarily assigned.

preceding tables and charts, indicates that the basis of credits and of classification of students within colleges is very similar to the basis on which institutional accreditation was granted prior to the recently promulgated changes of the North Central Association (see page 477). It is obvious that both individual credits and institutional accreditation have been granted on the basis of conditions, influences, and conduct which, although important for certain purposes, are far from being determiners or adequate criteria of the types of achievement measured by the tests used in this program. It

seems clear from the available evidence that institutional accreditation is at least as well founded and as accurately and consistently administered as the granting of credits to individual students within institutions. The ambiguities of institutional accreditation have derived from the same weakness as the ambiguities of credits within single institutions—the subjectivity, lack of comparability, and partial irrelevance of the measures used. The committee views with great hopefulness the reforms in accreditation procedures recently adopted by the North Central Association.

V. THE COLLEGE PHYSICS PROGRAM

Among the most promising developments in education are the departmental programs growing out of the sophomore surveys of past years. One of these, that in physics, is sufficiently resolved to warrant reporting; others are in process of gaining ground. Since the complete report of the physics project appears in the *American Physics Teacher*, September, 1934, Supplement, it will be necessary only briefly here to recount it. When the project was first considered, President Karl T. Compton remarked editorially as follows:

"It is reasonable that this new venture is but the first of a series which will stimulate interest in and improve the quality of the teaching of college physics. . . . Being unofficial and optional it does not curtail the freedom of any school to set its own standards and give its own examinations in accordance with its own particular and local interests. . . . Speaking for the American Institute of Physics, I am sure that this new move will be generally approved and its broader educational results watched with interest."²

Thanks are due to the Committee on Tests of the American Association of Physics Teachers for their collaboration in editing the tests, conducting the program, and reporting the results. The following physicists composed the committee: H. W. Farwell, Columbia University; C. J. Lapp, University of Iowa (Chairman); Frederic Palmer, Jr., Haverford

² *The American Physics Teacher*, December, 1933.

TABLE 9.—National percentile scales for the Cooperative Physics Tests given to college students in 1934. The scales are based upon returns for students tested after studying the various topics and show true percentiles, calculated from the distribution of scores. The scales are based on all returns received on or before March 1 for the first semester tests and July 1 for the second semester tests.

Each score in each column shows the upper score limit of the percentile indicated at the extreme right and left of the line. For example, the bottom entry in the column for total score on Mechanics and Heat shows that all scores of 4 or below have a percentile value of 1; all scores of 5 or 6 have a percentile value of 2; and all scores above 6 have a percentile value of 100. Since colleges used varying combinations of tests, the numbers of cases and of colleges vary from column to column. The mean and sigma of the scores and the number of colleges involved in each column are shown at the top of each column. When a score appears on a scale more than once, use the figure not in parenthesis.

| | Mech. | Heat | Sound | Light | Elec. | Mod. Phys. | Mech. + Heat | Mech. Heat Sound | Light + Elec. | Lt. Elec. Mod. Phys. | |
|------------------|-------|-------|-------|-------|-------|------------|--------------|------------------|---------------|----------------------|-------|
| No. of Colleges. | 180 | 169 | 93 | 112 | 108 | 61 | 85 | 76 | 97 | 54 | |
| No. of Cases... | 7,957 | 7,440 | 3,741 | 4,936 | 5,149 | 1,837 | 3,598 | 3,234 | 4,305 | 1,714 | |
| Mean..... | 18.3 | 11.0 | 8.1 | 12.5 | 17.3 | 6.2 | 28.7 | 38.2 | 29.9 | 37.3 | |
| Sigma..... | 8.8 | 5.6 | 3.9 | 5.7 | 6.9 | 3.7 | 13.0 | 16.3 | 11.4 | 14.8 | |
| Percentiles | | | | | | | | | | | %iles |
| 100 | 48 | 27 | 16 | 33 | 43 | 19 | 71 | 86 | 73 | 91 | 100 |
| 99 | 40 | 24 | (16) | 27 | 35 | 16 | 61 | 76 | 59 | 76 | 99 |
| 98 | 38 | 23 | 15 | 25 | 33 | 15 | 58 | 73 | 56 | 71 | 98 |
| 97 | 36 | 22 | (15) | 24 | 31 | 14 | 55 | 71 | 53 | 69 | 97 |
| 96 | 35 | 21 | (15) | (24) | 30 | 13 | 53 | 68 | 51 | 66 | 96 |
| 95 | 34 | (21) | (15) | 23 | 29 | (13) | 52 | 66 | 50 | 64 | 95 |
| 94 | 33 | 20 | (15) | 22 | (29) | (13) | 51 | 65 | 49 | 62 | 94 |
| 93 | 32 | (20) | 14 | (22) | 28 | 12 | 49 | 63 | 48 | 61 | 93 |
| 92 | 31 | 19 | 13 | 21 | 27 | (12) | 48 | 62 | 47 | 60 | 92 |
| 91 | (31) | (19) | (13) | (21) | (27) | (12) | 47 | 61 | 46 | 58 | 91 |
| 90 | 30 | (19) | (13) | 20 | (27) | 11 | (47) | 60 | 45 | 57 | 90 |
| 88 | 29 | 18 | (13) | (20) | 26 | (11) | 45 | 58 | 43 | 55 | 88 |
| 86 | 28 | (18) | 12 | 19 | 25 | 10 | 44 | 56 | 42 | 53 | 86 |
| 84 | 27 | 17 | (12) | 18 | 24 | (10) | 42 | 55 | 41 | 52 | 84 |
| 82 | 26 | (17) | (12) | (18) | (24) | (10) | 41 | 53 | 40 | 51 | 82 |
| 80 | (26) | 16 | (12) | 17 | 23 | 9 | 40 | 52 | 39 | 49 | 80 |
| 75 | 24 | 15 | 11 | 16 | 22 | (9) | 37 | 49 | 37 | 47 | 75 |
| 70 | 23 | 14 | (11) | 15 | 21 | 8 | 35 | 47 | 35 | 44 | 70 |
| 65 | 21 | 13 | 10 | 14 | 20 | 7 | 33 | 44 | 34 | 42 | 65 |
| 60 | 20 | 12 | 9 | (14) | 19 | (7) | 31 | 42 | 32 | 40 | 60 |
| 55 | 19 | 11 | (9) | 13 | 18 | 6 | 29 | 40 | 31 | 38 | 55 |
| 50 | 18 | (11) | 8 | 12 | 17 | (6) | 28 | 38 | 29 | 36 | 50 |
| 45 | 17 | 10 | (8) | 11 | 16 | 5 | 26 | 36 | 28 | 34 | 45 |
| 40 | 16 | 9 | 7 | (11) | 15 | (5) | 24 | 34 | 26 | 32 | 40 |
| 35 | 14 | 8 | (7) | 10 | 14 | 4 | 23 | 31 | 25 | 30 | 35 |
| 30 | 13 | (8) | 6 | 9 | 13 | (4) | 21 | 28 | 24 | 28 | 30 |
| 25 | 12 | 7 | 5 | 8 | 12 | 3 | 19 | 26 | 22 | 26 | 25 |
| 20 | 11 | 6 | 4 | (8) | 11 | (3) | 17 | 24 | 20 | 24 | 20 |
| 18 | 10 | 5 | (4) | 7 | (11) | (3) | (17) | 22 | 19 | (24) | 18 |
| 16 | 9 | (5) | (4) | (7) | 10 | 2 | 16 | 21 | 18 | 23 | 16 |
| 14 | (9) | (5) | (4) | 6 | (10) | (2) | 15 | 20 | (18) | 22 | 14 |
| 12 | 8 | 4 | 3 | (6) | 9 | (2) | 14 | 19 | 17 | 20 | 12 |
| 10 | 7 | (4) | (3) | 5 | (9) | (2) | 12 | 17 | 16 | 19 | 10 |
| 9 | (7) | 3 | (3) | (5) | 8 | 1 | (12) | (17) | 15 | (19) | 9 |
| 8 | 6 | (3) | 2 | (5) | (8) | (1) | 11 | 16 | (15) | 18 | 8 |
| 7 | (6) | (3) | (2) | (5) | 7 | (1) | 10 | 15 | 14 | (18) | 7 |
| 6 | 5 | 2 | (2) | 4 | (7) | (1) | (10) | 13 | 13 | 17 | 6 |
| 5 | (5) | (2) | 1 | (4) | (7) | 0 | 9 | 12 | 12 | 16 | 5 |
| 4 | 4 | (2) | (1) | 3 | 6 | (0) | 8 | 11 | 11 | 14 | 4 |
| 3 | 3 | 1 | (1) | (3) | 5 | (0) | 7 | 9 | 10 | 13 | 3 |
| 2 | 2 | 0 | 0 | 2 | 4 | (0) | 6 | 8 | 9 | 11 | 2 |
| 1 | 0 | (0) | (0) | 1 | 3 | (0) | 4 | 6 | 7 | 9 | 1 |

College; John T. Tate, University of Minnesota; A. G. Worthing, University of Pittsburgh. Acknowledgment is also owing to the 355 college departments which supported the program and to 150 individual physicists who made suggestions and offered criticism on the conduct of the project.

It should be noted in passing that not all of the 355 departments reported their results, and that some departments made returns too late to be included in the tables of norms. Differences in numbers in Table 9, National Percentiles, and Table 10, Distribution of College Averages, are thus accounted for.

TABLE 10.—Distribution of college averages. College means on the six topics and on four combinations of topics are here distributed in terms of national percentiles. Although the distribution is based on percentiles the scale has been corrected against the sigma scale background. The number of colleges in this table is larger than in Table 9, since all averages received on or before June 25, 1934, are included.

| | Mech. | Heat | Sound | Light | Elec. | Mod. Phys. | Mech. + Heat | Mech. + Heat + Sound | Light + Elec. | Lt., Elec., Mod. Phys. | |
|----------------|-------|-------|-------|-------|-------|------------|--------------|----------------------|---------------|------------------------|-------|
| No. Colleges.. | 214 | 217 | 155 | 130 | 130 | 64 | 97 | 95 | 107 | 57 | |
| No. Students.. | 8,911 | 9,104 | 6,215 | 5,673 | 6,010 | 1,887 | 4,022 | 3,675 | 4,642 | 1,762 | |
| Percentiles | | | | | | | | | | | %iles |
| 96-97 | 1 | | | | 2 | | 1 | | 1 | | 96-97 |
| 94-95 | | | | 1 | 1 | | 1 | | | | 94-95 |
| 92-93 | 1 | 3 | 1 | 1 | 1 | | 1 | | 2 | | 92-93 |
| 88-91 | 5 | 3 | | 1 | 3 | | 4 | | 2 | 3 | 88-91 |
| 84-87 | 1 | 4 | 8 | 3 | 2 | 3 | 1 | 2 | 1 | | 84-87 |
| 79-83 | 8 | 9 | 10 | 6 | 2 | 3 | 3 | 3 | 4 | 1 | 79-83 |
| 73-78 | 20 | 20 | 11 | 5 | 7 | 9 | 7 | 11 | 3 | 4 | 73-78 |
| 66-72 | 17 | 31 | 26 | 15 | 21 | | 10 | 5 | 17 | 6 | 66-72 |
| 58-65 | 35 | 31 | 27 | 12 | 15 | 11 | 17 | 22 | 19 | 5 | 58-65 |
| 50-57 | 41 | 27 | 34 | 30 | 19 | 15 | 9 | 15 | 8 | 12 | 50-57 |
| 42-49 | 27 | 21 | 16 | 17 | 14 | 10 | 15 | 12 | 12 | 6 | 42-49 |
| 34-41 | 28 | 39 | 9 | 10 | 17 | 9 | 14 | 9 | 10 | 10 | 34-41 |
| 27-33 | 4 | 9 | 9 | 12 | 10 | | 3 | 6 | 11 | 4 | 27-33 |
| 21-26 | 12 | 15 | 1 | 5 | 4 | 1 | 7 | 1 | 5 | 3 | 21-26 |
| 16-20 | 10 | 2 | 2 | 4 | 6 | | 2 | 4 | 5 | 1 | 16-20 |
| 12-15 | 3 | 1 | 1 | 5 | 4 | 1 | 2 | 3 | 6 | 1 | 12-15 |
| 8-11 | 1 | 2 | | 2 | 3 | 1 | 1 | | | | 8-11 |
| 6-7 | | | | | | | | 1 | 1 | | 6-7 |
| 4-5 | | | | 1 | | | | | | 1 | 4-5 |

The Tests.—The tests were constructed to sample the content of elementary physics and to permit the making of comparable forms. Thus companion forms might be used before and after any given course in elementary physics to measure growth in the subject, and the difference obtained could be regarded as a tentative norm of expectancy for future classes.

Originally the topics of mechanics, heat, and sound were planned for one combined form, and light, electricity and modern physics for the other. Subsequently, however, in answer to demands for atypical combinations, six topics were printed separately as follows: Mechanics, 48 items, 60 minutes; Heat, 27 items, 30 minutes; Sound, 16 items, 20 minutes; Light, 35 items, 40 minutes; Electricity, 44 items, 50 minutes; Modern Physics, 19 items, 25 minutes. Since specialization in physics usually follows and is predicated upon the elementary course, it is recommended that departments continue to use combinations of the topics for diagnostic purposes and for identifying students whose general grasp of elementary physics is unusual. This practice seems more reasonable for the selection of advanced students and even for identifying special interests than one which would restrict measurement too narrowly to those topics of peculiar interest to a given instructor.

National Percentiles.—Table 9 enables each college to find the percentile rank of each student on each topic. From this table it is evident that the tests are well adjusted in difficulty for participating colleges. The scores are not piled up at either end; hence there is room at the top and bottom for differentiating good and poor students.

College Averages.—The variability of scores within each college group will not be shown here; but the fact that this variability was more striking than differences between groups makes it necessary to interpret any distribution of averages with caution. Any college, by referring its average scores to Table 10, may identify its relative position among the participating groups.

Gains in Achievement.—The test results of those colleges administering tests before and after study were analyzed to discover the average gain of all students without regard to type of school, and of student groups in colleges making the largest and smallest gains.

The amount of gain within single colleges varies markedly. These differences, however, are not subject to direct comparison, since the abilities and aptitudes and needs vary from college to college. The average gain for all students is of gen-

eral interest; the gain of any one is of interest only to that college. It must be kept in mind that the average class gain must be interpreted in the light of local conditions. Each college must set up its own norms of expectancy, and the deviations from this norm may be analyzed with reference to the individual case. Individual differences cover a wider range, and are educationally more significant than the variations occurring between groups. Charting of single case gains can not be done in this study; it may be done, however, by each department to determine differences in growth. Doubtless some such charts will be startling. Within the same class, some students will make tremendous gains in achievement, others will make little or none. Those deviations which are most marked may be investigated with a view to further clinical diagnosis and educational guidance. But the average gain for the school is most significant when it is taken as the point of reference for the interpretation of the individual gain.

In this connection, it is difficult to exaggerate the importance of the variability of scores in the pre-study groups. All teachers in physics and other subjects are only too painfully aware of the variability in post-study groups, because there are too few classes in which some students are not "flunked"; but not many teachers are clearly aware of the highly important and encouraging fact that a few students at the *beginning* of a course are already able to equal or exceed the average of the whole class at the *end* of the course. Chart 8 shows that in Light, at least one student at the beginning was above the average of the class at the end of the semester; and in both Electricity and Modern Physics one student at the beginning secured a score which was achieved only by the highest one percent of the class at the end. In Electricity about 5 per cent of the pupils secured pre-study scores above the post-study average score of the entire group that took the tests.

The advantages of early identification of such promising pupils are obvious, and it is gratifying to note that during the last few years the search for and special study of such pupils has been a growing concern of an increasing number of teachers of physics and other subjects. Of course, no single

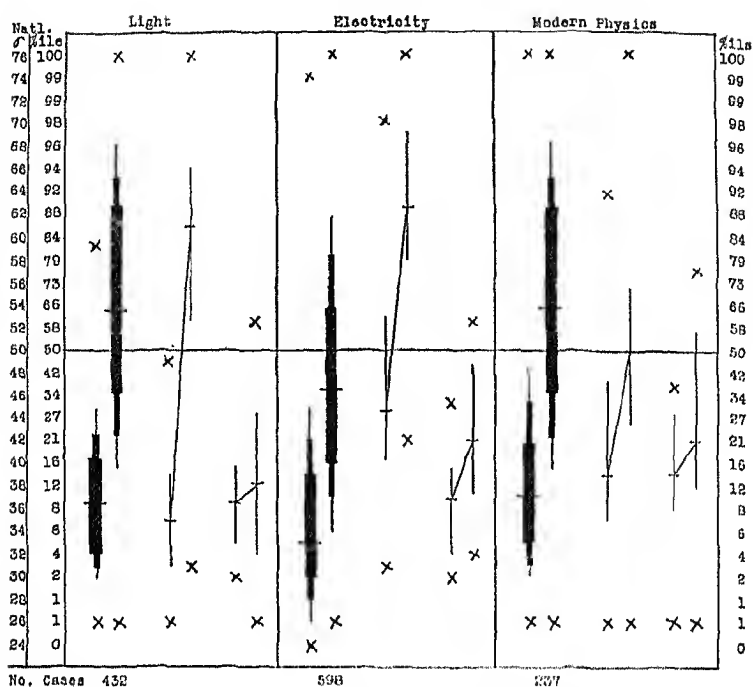


CHART 8 represents pre- and post-study comparisons for Light, Electricity, and Modern Physics. The two bars at the left of each section represent distribution of scores of all students who took the tests before and after study. The two following figures (light lines) represent the pre- and post-study results for the two colleges having the largest and the smallest gains in each topic. The range of scores is represented by the crosses; the middle 50 per cent by the heavy bar; the middle two-thirds by the narrow bar; and the 10th and 90th percentiles by the light lines.

test can be expected to give a fully trustworthy index of even one of the many qualities required for a productive career in physics, but any student who *before* formal instruction secures a higher score than the average student secures *after* formal instruction is at least worthy of being studied. Some of them very richly reward the teacher who vouchsafes them special attention and encouragement.

The students at the other end of the scale also merit special attention. Some of them after taking a full course, at the expense of the state or of their parents, are still in the score-range of the lowest one per cent of those who are tested at

the beginning of the course. Some of these students work harder than the majority of those who make large gains and passing grades; while it is obvious that they do not deserve, or rather that their lot will not be improved (and might be aggravated) by, passing grades *in physics*, it is the opinion of a growing number of educators that such students do deserve something more constructive and helpful for their time and money than merely a flunking grade. It is equally true that society deserves more for the time and money spent on such pupils than the mere stigmatizing of them as "failures." The question of what to do for such students can be answered only by careful and long continued experimentation. An essential part of such experimentation will be a surer identification of such students, and a more adequate study of their growth along various lines of development. Growth cannot be studied without comparable measures; hence the emphasis which the Committee has placed on the importance of developing *comparable* tests.

Sex Differences.—It is a well-known fact, derived from numerous studies, that certain characteristic differences in achievement occur between men and women. Women are generally superior in literature and language subjects but generally inferior in mathematics and science. The mean differences, however, seem to be small in relation to the variability of either sex groups; the overlapping is usually quite extensive. Chart 9 shows the medians of men and women on each topic of the physics test. It is difficult at this time to account surely for the fluctuations in medians for the women's group, but they are doubtless due in part at least to sampling differences.

The data of Chart 9 should not obscure the importance of individual scores. Within both sex groups individual differences are more important than group differences. The superior student, regardless of sex, should be identified, encouraged to continue in subjects for which he displays a particular flair, and given special work if such seems desirable to the department head in the light of all relevant data and circumstances. One department head has suggested that it

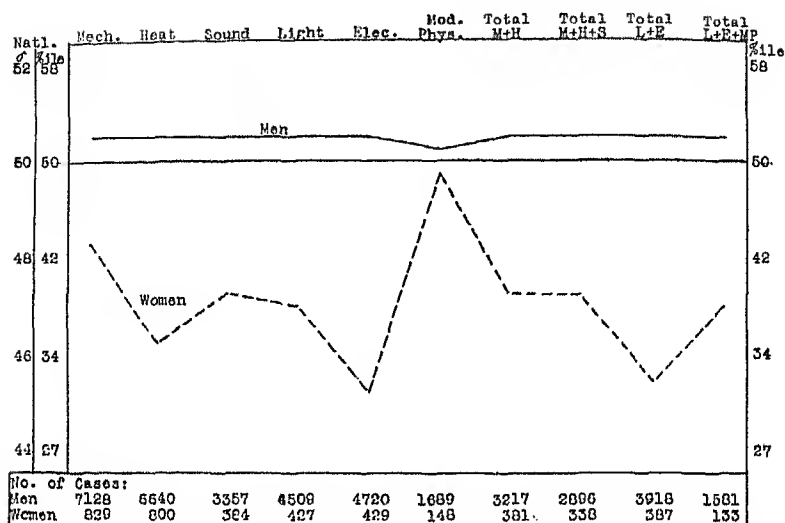


CHART 9.—Sex differences; median scores for men and women graphed in national percentiles scaled to sigma units. The numbers of cases are indicated at the bottom of the chart.

may be a greater contribution to turn out one gifted research scholar than to turn out a hundred "pass" students each year. But there is no necessary conflict between these two types of contributions. Physics has rich cultural as well as disciplinary and scholarly values; special care of the few gifted pupils does not mean that the less gifted pupils need to be neglected or sacrificed on the high standards which are appropriate only to gifted pupils.

VI. CONCLUSIONS

This opportunity is taken to acknowledge obligations to those colleges which cooperated in the 1934 program and made it a success. Thanks are especially due to administrators and teachers who have offered their criticisms and suggestions to the committee and who have taken pains to describe the uses to which they have put test results and the efforts they have made toward systematic diagnosis and guidance of the individual.

A concept of education as broad as that described in this report and involving a multitude of factors which could not

be touched upon in the foregoing pages does not lend itself to simple analysis. For this reason the generalizations which follow must be taken more as suggestions than as final conclusions.

By means of the college averages each school may compare its achievement with that of any other, but obviously such comparison is not the major purpose of the program. It was conceived like those of past years to uncover some of the factors which are diagnostic—for the administrator, the instructor, and the student. For this purpose variability in achievement was measured; the national percentile tables were drawn up so that a student's score could be interpreted against national norms; and various group differences were tabulated and analyzed. The fact that colleges differ markedly in average achievement must be interpreted in the light of local conditions and of the unique objectives set by the college itself. For constructive education, individual deviations from group or class averages are more significant than college deviations from the national averages.

The extent of overlapping of professional goal groups, of age groups, of men and women, and of college classes make it increasingly apparent that group education does not level out individual differences. Rather these differences obtain in spite of relatively uniform classroom procedures.

Such generalizations as can be drawn from the data of the report tend to call into question the conventional classroom and laboratory practices designed for group instruction. Although these practices are doubtless excellent as points of departure, the extent of variation in student performance calls attention to the need for revaluing the teaching function. There is evidence to indicate that the amount of time devoted purely to group instruction is decreasing and that man to man relations between teacher and student are coming to be recognized as the most promising complement to classroom work.

If education is to be individualized without tremendous waste, students must be analyzed to determine their interests as these are revealed by what they have already learned. Quantitative measurement of their achievement is the point of

departure for making individualized education available to them. From such information the teacher may work outward to the more difficult problem of guiding the student further in the light of his peculiar character traits, his degree of initiative, and his ability to carry out independent, self-initiated study. Systematic records kept over a period of time should prove highly significant in the selection of students for advanced or graduate work and for placing graduates in responsible positions in industry, in teaching, and in research. Such a concept of the teaching function makes the teacher not less important but rather more important. His obligation as scientist and as artist thus becomes extended rather than restricted.

With thanks for the splendid spirit of cooperation shown by colleges collaborating in the research, the committee submits its report to the participating schools. It is believed that even larger numbers will aid in continuing the program next year and that even more extensive and varied uses of the results will be made for individual diagnosis and guidance. In anticipation of the program for the coming year, each department taking part in the present survey should inform the committee about local researches and clinical guidance so that those seeking help in individualizing education may thus profit.

Respectfully submitted,

THE COMMITTEE ON EDUCATIONAL TESTING,

F. S. Beers,
Secretary

S. P. Capen,
G. W. Frasier,
J. T. Giles,
V. A. C. Henmon,
J. B. Johnston,
Chairman

Max McConn,
F. L. McVey,
C. M. Ruch,
W. L. Spencer,
L. M. Terman,
G. A. Works,
C. S. Yoakum,
G. F. Zook.

Accredited Higher Institutions

IN 1924 the American Council on Education approved and published two reports of its Committee on Standards, recommending uniform standards as criteria for accrediting colleges, teacher-training institutions and junior colleges. Since then the various regional associations have worked continuously on this problem, have revised their respective lists each year and are gradually working toward uniform standards.

The following list is merely a compilation as of October 1, 1934, of the lists of the established accrediting agencies; namely, the Association of American Universities, the Middle States Association of Colleges and Secondary Schools, the North Central Association of Colleges and Secondary Schools, the Northwest Association of Secondary and Higher Schools and the Southern Association of Colleges and Secondary Schools.

In the New England Association of Colleges and Secondary Schools, the standards set up for institutional membership are equivalent to those required for accrediting by the other regional associations. Therefore the institutional members of the New England Association are also included in this list.

It will be noted that the five regional associations of colleges and secondary schools just mentioned cover among them the entire United States with the exception of the far southwest. Hence institutions in that region would not appear in the following list unless they appear on the list of the Association of American Universities, which is a national list.

The American Council on Education has printed as a separate pamphlet its recommendations concerning standards for accrediting higher institutions. Copies of this pamphlet and of the accompanying list will be sent without charge on request, addressed to the office of the Council.

ALABAMA

Alabama College, Montevallo
Alabama Polytechnic Institute, Auburn
Birmingham-Southern College, Birmingham
Howard College, Birmingham
Judson College, Marion
Spring Hill College, Spring Hill
Talladega College, Talladega
Tuskegee Normal and Industrial Institute,
Tuskegee
University of Alabama, University
Woman's College of Alabama, Montgomery

ALASKA

Alaska College of Agriculture and School
of Mines, Fairbanks

ARIZONA

Arizona State Teachers College, Flagstaff
Arizona State Teachers College, Tempe
University of Arizona, Tucson

ARKANSAS

Arkansas State Teachers College, Conway

Henderson State Teachers College, Arkadelphia
Hendrix College, Conway
State Agricultural and Mechanical College,
Jonesboro
University of Arkansas, Fayetteville

CALIFORNIA

California Institute of Technology, Pasadena
Claremont Colleges (Pomona; Scripps),
Claremont
College of the Holy Names, Oakland
College of the Pacific, Stockton
Dominican College of San Rafael, San Rafael
Immaculate Heart College, Hollywood
Loyola University, Los Angeles
Mills College, Oakland
Mt. St. Mary's College, Los Angeles
Occidental College, Los Angeles
Pacific Union College, Angwin
San Francisco College for Women, San
Francisco
St. Mary's College, St. Mary's

Stanford University, Stanford University
 University of California, Berkeley
 University of California, Los Angeles
 University of Redlands, Redlands
 University of Santa Clara, Santa Clara
 University of San Francisco, San Francisco
 University of Southern California, Los Angeles
 Whittier College, Whittier

COLORADO

Colorado Agricultural College, Fort Collins
 Colorado College, Colorado Springs
 Colorado School of Mines, Golden
 Colorado State Teachers College, Greeley
 Loretto Heights College, Denver
 University of Colorado, Boulder
 University of Denver, Denver
 Western State College of Colorado, Gunnison

CONNECTICUT

Albertus Magnus College, New Haven
 Connecticut State College, Storrs
 Connecticut College for Women, New London
 Trinity College, Hartford
 Wesleyan University, Middletown
 Yale University, New Haven

DELAWARE

* University of Delaware, Newark

DISTRICT OF COLUMBIA

American University, Washington, D. C.
 Catholic University of America, Washington, D. C.
 George Washington University, Washington, D. C.
 Georgetown University, Washington, D. C.
 Howard University, Washington, D. C.
 Trinity College, Washington, D. C.

FLORIDA

Florida State College for Women, Tallahassee
 John B. Stetson University, De Land
 Rollins College, Winter Park
 University of Florida, Gainesville

GEORGIA

Agnes Scott College, Decatur
 Atlanta University, Atlanta
 Brenau College, Gainesville
 Emory University, Atlanta
 Georgia School of Technology, Atlanta
 Georgia State College for Women, Milledgeville
 Georgia State Women's College, Valdosta
 Mercer University, Macon
 Morehouse College, Atlanta
 Shorter College for Women, Rome
 Spelman College, Atlanta
 University of Georgia, Athens
 Wesleyan College, Macon

HAWAII

University of Hawaii, Honolulu

IDAHO

College of Idaho, Caldwell
 University of Idaho, Moscow

ILLINOIS

Armour Institute of Technology, Chicago
 Augustana College and Theological Seminary, Rock Island
 Bradley Polytechnic Institute, Peoria
 Carthage College, Carthage
 De Paul University, Chicago
 Elmhurst College, Elmhurst
 Eureka College, Eureka
 Illinois College, Jacksonville
 Illinois State Normal University, Normal
 Illinois State Normal University (Southern), Carbondale
 Illinois State Teachers College (Eastern), Charleston
 Illinois State Teachers College (Northern), De Kalb
 Illinois State Teachers College (Western), Macomb
 Illinois Wesleyan University, Bloomington
 James Millikin University, Decatur
 Knox College, Galesburg
 Lake Forest College, Lake Forest
 Lewis Institute, Chicago
 Loyola University, Chicago
 MacMurray College for Women, Jacksonville
 Monmouth College, Monmouth
 North Central College, Naperville
 Northwestern University, Evanston
 Rockford College, Rockford
 Rosary College, River Forest
 Shurtleff College, Alton
 University of Chicago, Chicago
 University of Illinois, Urbana
 Wheaton College, Wheaton

INDIANA

Ball State Teachers College, Muncie
 Butler University, Indianapolis
 De Pauw University, Greencastle
 Earlham College, Richmond
 Evansville College, Evansville
 Franklin College of Indiana, Franklin
 Hanover College, Hanover
 Indiana State Teachers College, Terre Haute
 Indiana University, Bloomington
 Manchester College, North Manchester
 Purdue University, Lafayette
 Rose Polytechnic Institute, Terre Haute
 St. Mary's College, Notre Dame
 St. Mary of the Woods College, St. Mary of the Woods
 University of Notre Dame du Lac, Notre Dame

Valparaiso University, Valparaiso
Wabash College, Crawfordsville

IOWA

Clarke College, Dubuque
Coe College, Cedar Rapids
Columbia College of Dubuque, Dubuque
Cornell College, Mt. Vernon
Drake University, Des Moines
Grinnell College, Grinnell
Iowa State College of Agriculture and Mechanic Arts, Ames
Iowa State Teachers College, Cedar Falls
Iowa Wesleyan College, Mt. Pleasant
Luther College, Decorah
Morningside College, Sioux City
Parsons College, Fairfield
St. Ambrose College, Davenport
Simpson College, Indianola
University of Dubuque, Dubuque
University of Iowa, Iowa City

KANSAS

Baker University, Baldwin
Bethany College, Lindsborg
College of Emporia, Emporia
Fort Hays Kansas State College, Hays
Friends University, Wichita
Kansas State College of Agriculture and Applied Science, Manhattan
Kansas State Teachers College of Emporia, Emporia
Kansas State Teachers College, Pittsburg
Marymount College, Salina
Mount St. Scholastica College, Atchison
Municipal University of Wichita, Wichita
Ottawa University, Ottawa
Southwestern College, Winfield
St. Benedict's College, Atchison
Sterling College, Sterling
The St. Mary College, Leavenworth
University of Kansas, Lawrence
Washburn College, Topeka

KENTUCKY

Berea College, Berea
Centre College of Kentucky, Danville
Eastern Kentucky State Teachers College, Richmond
Georgetown College, Georgetown
Morehead State Teachers College, Morehead
Murray State Teachers College, Murray
Transylvania College, Lexington
Union College, Barbourville
University of Kentucky, Lexington
University of Louisville, Louisville
Western Kentucky State Teachers College, Bowling Green

LOUISIANA

Centenary College of Louisiana, Shreveport
Louisiana College, Pineville

Louisiana Polytechnic Institute, Ruston
Louisiana State University, Baton Rouge
Loyola University, New Orleans
Newcomb College, New Orleans
Southwestern Louisiana Institute, Lafayette
State Normal College, Natchitoches
Tulane University of Louisiana, New Orleans

MAINE

Bates College, Lewiston
Bowdoin College, Brunswick
Colby College, Waterville
University of Maine, Orono

MARYLAND

College of Notre Dame of Maryland, Baltimore
Goucher College, Baltimore
Hood College, Frederick
Johns Hopkins University, Baltimore
Loyola College, Baltimore
Morgan College, Baltimore
Mt. St. Mary's College, Emmitsburg
St. John's College, Annapolis
St. Joseph's College, Emmitsburg
United States Naval Academy, Annapolis
University of Maryland, College Park
Washington College, Chestertown
Western Maryland College, Westminster

MASSACHUSETTS

American International College, Springfield
Amherst College, Amherst
Boston College, Chestnut Hill
Boston University, Boston
Clark University, Worcester
College of the Holy Cross, Worcester
Emmanuel College, Boston
Harvard University, Cambridge
International Y. M. C. A. College, Springfield
Massachusetts Institute of Technology, Cambridge
Massachusetts State College, Amherst
Mt. Holyoke College, South Hadley
Radcliffe College, Cambridge
Regis College, Weston
Simmons College, Boston
Smith College, Northampton
Tufts College, Medford
Wellesley College, Wellesley
Wheaton College, Norton
Williams College, Williamstown
Worcester Polytechnic Institute, Worcester

MICHIGAN

Albion College, Albion
Alma College, Alma
Battle Creek College, Battle Creek
Calvin College, Grand Rapids
Hillsdale College of Michigan, Hillsdale
Hope College, Holland

Kalamazoo College, Kalamazoo
 Marygrove College, Detroit
 Michigan College of Mining and Technology,
 Houghton
 Michigan State College of Agriculture and
 Applied Science, East Lansing
 Michigan State Normal College, Ypsilanti
 Michigan State Teachers College (Central),
 Mount Pleasant
 Michigan State Teachers College (Western),
 Kalamazoo
 Michigan State Teachers College (Northern),
 Marquette
 University of Michigan, Ann Arbor
 Wayne University, Detroit

MINNESOTA

Carleton College, Northfield
 College of St. Benedict, St. Joseph
 College of St. Catherine, St. Paul
 College of St. Scholastica, Duluth
 College of St. Teresa, Winona
 College of St. Thomas, St. Paul
 Concordia College, Moorhead
 Gustavus Adolphus College, St. Peter
 Hamline University, St. Paul
 Macalester College, St. Paul
 St. Olaf College, Northfield
 University of Minnesota, Minneapolis

MISSISSIPPI

Blue Mountain College, Blue Mountain
 Delta State Teachers College, Cleveland
 Millsaps College, Jackson
 Mississippi College, Clinton
 Mississippi State College, State College
 Mississippi State College for Women, Co-
 lumbus
 Mississippi State Teachers College, Hatties-
 burg
 Mississippi Woman's College, Hattiesburg
 University of Mississippi, University

MISSOURI

Central College, Fayette
 Culver-Stockton College, Canton
 Drury College, Springfield
 Harris Teachers College, St. Louis
 Lincoln University, Jefferson City
 Lindenwood College, St. Charles
 Missouri State Teachers College (Central),
 Warrensburg
 Missouri State Teachers College (North-
 east), Kirksville
 Missouri State Teachers College (North-
 west), Maryville
 Missouri State Teachers College (South-
 east), Cape Girardeau
 Missouri State Teachers College (South-
 west), Springfield
 Missouri Valley College, Marshall

Park College, Parkville
 St. Louis University, St. Louis
 Tarkio College, Tarkio
 University of Missouri, Columbia
 Washington University, St. Louis
 Webster College for Women, Webster
 Groves
 Westminster College, Fulton
 William Jewell College, Liberty

MONTANA

Intermountain Union College, Helena
 Montana State College, Bozeman
 Montana State School of Mines, Butte
 Carroll College, Helena
 State University of Montana, Missoula

NEBRASKA

Creighton University, Omaha
 Doane College, Crete
 Hastings College, Hastings
 Nebraska State Teachers and Normal Col-
 lege, Chadron
 Nebraska State Teachers College, Kearney
 Nebraska State Teachers College, Wayne
 Nebraska Wesleyan University, Lincoln
 Peru State Teachers College, Peru
 University of Nebraska, Lincoln

NEVADA

University of Nevada, Reno

NEW HAMPSHIRE

Dartmouth College, Hanover
 University of New Hampshire, Durham

NEW JERSEY

Brothers College, Madison
 College of St. Elizabeth, Convent Station
 Georgian Court College, Lakewood
 New Jersey College for Women, New
 Brunswick
 Princeton University, Princeton
 Rutgers University, New Brunswick
 Seton Hall College, South Orange
 Stevens Institute of Technology, Hoboken

NEW MEXICO

New Mexico College of Agriculture and
 Mechanic Arts, State College
 University of New Mexico, Albuquerque

NEW YORK

Adelphi College, Garden City
 Alfred University, Alfred
 Barnard College, New York City
 Brooklyn College, Brooklyn
 Canisius College of Buffalo, Buffalo
 City College, New York City
 Clarkson School of Technology, Potsdam
 Colgate University, Hamilton
 College of Mt. St. Vincent, Mt. St. Vin-
 cent-on-Hudson

College of New Rochelle, New Rochelle
 College of the Sacred Heart, New York City
 College of St. Rose, Albany
 Columbia University, New York City
 Cornell University, Ithaca
 D'Youville College, Buffalo
 Elmira College, Elmira
 Fordham University, Fordham
 Good Counsel College, White Plains
 Hamilton College, Clinton
 Hobart College, Geneva
 Hunter College of the City of New York, New York City
 Keuka College, Keuka Park
 Manhattan College, New York City
 Marymount College, Tarrytown-on-Hudson
 Nazareth College, Rochester
 New York State College for Teachers, Albany
 New York University, New York City
 Niagara University, Niagara
 Polytechnic Institute of Brooklyn, Brooklyn
 Rensselaer Polytechnic Institute, Troy
 Russell Sage College, Troy
 St. Bonaventure's College and Seminary, St. Bonaventure
 St. John's University, Brooklyn
 St. Joseph's College for Women, Brooklyn
 St. Lawrence University, Canton
 St. Stephen's College, Annandale
 Skidmore College, Saratoga Springs
 Syracuse University, Syracuse
 Union College, Schenectady
 United States Military Academy, West Point
 University of Buffalo, Buffalo
 University of Rochester, Rochester
 Vassar College, Poughkeepsie
 Wells College, Aurora
 William Smith College, Geneva

NORTH CAROLINA

Catawba College, Salisbury
 Davidson College, Davidson
 Duke University, Durham
 East Carolina State Teachers College, Greenville
 Greensboro College, Greensboro
 Guilford College, Guilford College
 Johnson C. Smith University, Charlotte
 Lenoir-Rhyne College, Hickory
 Meredith College, Raleigh
 North Carolina College for Women, Greensboro
 North Carolina State College of Agriculture and Engineering, Raleigh
 Queens-Chicora College, Charlotte
 Salem College, Winston-Salem
 University of North Carolina, Chapel Hill
 Wake Forest College, Wake Forest

NORTH DAKOTA

Jamestown College, Jamestown
 North Dakota Agricultural College, Fargo
 University of North Dakota, Grand Forks

OHIO

Antioch College, Yellow Springs
 Baldwin Wallace College, Berea
 Bowling Green State College, Bowling Green
 Capital University, Columbus
 Case School of Applied Science, Cleveland
 College of Mt. St. Joseph on the Ohio, Mt. St. Joseph
 College of Wooster, Wooster
 Denison University, Granville
 Findlay College, Findlay
 Heidelberg College, Tiffin
 Hiram College, Hiram
 John Carroll University, Cleveland
 Kent State College, Kent
 Lake Erie College, Painesville
 Marietta College, Marietta
 Mary Manse College, Toledo
 Miami University, Oxford
 Mt. Union College, Alliance
 Muskingum College, New Concord
 Notre Dame College, South Euclid
 Oberlin College, Oberlin
 Ohio State University, Columbus
 Ohio University, Athens
 Ohio Wesleyan University, Delaware
 Otterbein University, Westerville
 St. Mary of the Springs College, East Columbus
 University of Akron, Akron
 University of Cincinnati, Cincinnati
 University of the City of Toledo, Toledo
 University of Dayton, Dayton
 Ursuline College, Cleveland
 Western College, Oxford
 Western Reserve University, Cleveland
 Wittenberg College, Springfield

OKLAHOMA

Oklahoma Agricultural and Mechanical College, Stillwater
 Oklahoma College for Women, Chickasha
 Phillips University, Enid
 University of Oklahoma, Norman
 University of Tulsa, Tulsa

OREGON

Albany College, Albany
 Columbia University, Portland
 Linfield College, McMinnville
 Marylhurst College, Oswego
 Mt. Angel College, Mt. Angel
 Oregon State Agricultural College, Corvallis
 Pacific University, Forest Grove

Reed College, Portland
University of Oregon, Eugene
Willamette University, Salem

PENNSYLVANIA

Albright College, Reading
Allegheny College, Meadville
Bryn Mawr College, Bryn Mawr
Bucknell University, Lewisburg
Carnegie Institute of Technology, Pittsburgh
Dickinson College, Carlisle
Drexel Institute, Philadelphia
Franklin and Marshall College, Lancaster
Geneva College, Beaver Falls
Gettysburg College, Gettysburg
Grove City College, Grove City
Haverford College, Haverford
Immaculata College, Immaculata
Juniata College, Huntingdon
Lafayette College, Easton
LaSalle College, Philadelphia
Lebanon Valley College, Annville
Lehigh University, Bethlehem
Lincoln University, Lincoln University
Marywood College, Scranton
Mercyhurst College, Erie
Moravian College and Theological Seminary, Bethlehem
Mt. St. Joseph College, Philadelphia
Muhlenberg College, Allentown
Pennsylvania College for Women, Pittsburgh
Pennsylvania State College, State College
Rosemont College, Rosemont
St. Joseph's College, Philadelphia
St. Thomas College, Scranton
St. Vincent College, Latrobe
Seton Hill College, Greensburg
Susquehanna University, Selinsgrove
Swarthmore College, Swarthmore
Temple University, Philadelphia
Thiel College, Greenville
University of Pennsylvania, Philadelphia
University of Pittsburgh, Pittsburgh
Ursinus College, Collegeville
Villa Marie College, Erie
Villanova College, Villanova
Washington and Jefferson College, Washington
Westminster College, New Wilmington
Wilson College, Chambersburg

RHODE ISLAND

Brown University, Providence
Pembroke College, Providence
Providence College, Providence
Rhode Island State College, Kingston

SOUTH CAROLINA

Clemson Agricultural College of South Carolina, Clemson

Coker College, Hartsville
College of Charleston, Charleston
Converse College, Spartanburg
Erskine College, Due West
Furman University, Greenville
Limestone College, Gaffney
Presbyterian College of South Carolina, Clinton
The Citadel, Charleston
University of South Carolina, Columbia
Winthrop College, Rock Hill
Wofford College, Spartanburg

SOUTH DAKOTA

Augustana College, Sioux Falls
Dakota Wesleyan University, Mitchell
Huron College, Huron
Sioux Falls College, Sioux Falls
South Dakota State College of Agriculture and Mechanic Arts, Brookings
South Dakota State School of Mines, Rapid City
University of South Dakota, Vermillion
Yankton College, Yankton

TENNESSEE

Carson-Newman College, Jefferson City
Fisk University, Nashville
George Peabody College for Teachers, Nashville
Maryville College, Maryville
Southwestern, Memphis
Tennessee State Teachers College, Johnson City
Tennessee State Teachers College, Memphis
Tennessee State Teachers College, Murfreesboro
Tusculum College, Greenville
University of Chattanooga, Chattanooga
University of the South, Sewanee
University of Tennessee, Knoxville
Vanderbilt University, Nashville

TEXAS

Agricultural and Mechanical College of Texas, College Station
Baylor College for Women, Belton
Baylor University, Waco
East Texas State Teachers College, Commerce
Incarnate Word College, San Antonio
North Texas State Teachers College, Denton
Our Lady of the Lake College, San Antonio
Rice Institute, Houston
Sam Houston State Teachers College, Huntsville
Simmons University, Abilene
Southern Methodist University, Dallas
Southwest Texas State Teachers College, San Marcos

Southwestern University, Georgetown
 Stephen F. Austin State Teachers College,
 Nagadoches
 Sul Ross State Teachers College, Alpine
 Texas Christian University, Fort Worth
 Texas College of Arts and Industries,
 Kingsville
 Texas State College for Women, Denton
 Texas Technological College, Lubbock
 Trinity University, Waxahachie
 University of Texas, Austin
 West Texas State Teachers College, Canyon
 Wiley College, Marshall

UTAH

Brigham Young University, Provo
 University of Utah, Salt Lake City
 Utah Agricultural College, Logan

VERMONT

Middlebury College, Middlebury
 Norwich University, Northfield
 University of Vermont, Burlington

VIRGINIA

Bridgewater College, Bridgewater
 College of William and Mary in Virginia,
 Williamsburg
 Emory and Henry College, Emory
 Hampden-Sydney College, Hampden-Sydney
 Hampton Institute, Hampton
 Hollins College, Hollins
 Lynchburg College, Lynchburg
 Mary Baldwin College, Staunton
 Randolph-Macon College for Men, Ashland
 Randolph-Macon Woman's College, Lynch-
 burg
 Roanoke College, Salem
 State Teachers College, East Radford
 State Teachers College, Farmville
 State Teachers College, Fredericksburg
 State Teachers College, Harrisonburg

Sweet Briar College, Sweet Briar
 University of Richmond, Richmond
 University of Virginia, Charlottesville
 Virginia Military Institute, Lexington
 Virginia Agricultural College and Polytech-
 nic Institute, Blacksburg
 Virginia State College, Petersburg
 Washington and Lee University, Lexington

WASHINGTON

College of Puget Sound, Tacoma
 Gonzaga University, Spokane
 State College of Washington, Pullman
 University of Washington, Seattle
 Whitman College, Walla Walla
 Whitworth College, Spokane

WEST VIRGINIA

Bethany College, Bethany
 Concord State Teachers College, Athens
 Marshall College, Huntington
 West Virginia State College, Institute
 West Virginia University, Morgantown

WISCONSIN

Beloit College, Beloit
 Carroll College, Waukesha
 Lawrence College, Appleton
 Marquette University, Milwaukee
 Milwaukee-Downer College, Milwaukee
 Mount Mary College, Milwaukee
 Ripon College, Ripon
 State Teachers College, Superior
 Stout Institute, Menomonee
 University of Wisconsin, Madison
 Wisconsin State Teachers College, LaCrosse
 Wisconsin State Teachers College, Milwau-
 kee
 Wisconsin State Teachers College, Oshkosh

WYOMING

University of Wyoming, Laramie

Teachers' Colleges

CALIFORNIA

California State Teachers College, San
 Diego
 Fresno State Teachers College, Fresno

IDAHO

State Normal School, Albion
 State Normal School, Lewiston

MONTANA

Eastern Montana Normal School, Billings
 Montana State Normal School, Dillon

OREGON

Eastern Oregon State Normal School, La
 Grande
 Marylhurst Normal School, Oswego
 Mt. Angel Normal School, Mt. Angel
 Southern Oregon Normal School, Ashland
 State Normal School, Monmouth

WASHINGTON

Holy Names Normal School, Spokane
 Seattle Pacific College, Seattle
 State Normal School, Bellingham
 State Normal School, Cheney
 State Normal School, Ellensburg

Junior Colleges

ALABAMA

Marion Institute, Marion
St. Bernard College, St. Bernard

ARIZONA

Phoenix Junior College, Phoenix

ARKANSAS

Arkansas Agricultural and Mechanical College, Monticello
Arkansas Polytechnic Institute, Russellville
Central Junior College, Conway
Little Rock Junior College, Little Rock
State Agricultural and Mechanical College, Magnolia

CALIFORNIA

Southern California Junior College, Arlington

COLORADO

Colorado Women's College, Denver

CONNECTICUT

Junior College of Connecticut, Bridgeport

DISTRICT OF COLUMBIA

Columbia Junior College, Washington, D. C.
Junior College of Georgetown Visitation Convent, Washington, D. C.

FLORIDA

St. Petersburg Junior College, St. Petersburg

GEORGIA

Andrew College, Cuthbert
Junior College of Augusta, Augusta
Middle Georgia College, Cochran
Georgia Southwestern, Americus

IDAHO

University of Idaho, Southern Branch, Pocatello
Northwest Nazarene College, Nampa

ILLINOIS

Backburn College, Carlinville
Frances Shimer School, Mount Carroll
George Williams College, Chicago
Joliet Junior College, Joliet
La Salle-Peru-Oglesby Junior College, La Salle
Lincoln College, Lincoln
Lyons Township Junior College, La Grange
Monticello Seminary, Godfrey
Morton Junior College, Cicero
North Park College, Chicago
Springfield Junior College, Springfield
Thornton Junior College, Harvey
Y. M. C. A. School of Liberal Arts, Chicago

INDIANA

St. Joseph's College, Collegeville

IOWA

Graceland College, Lamoni
Mason City Junior College, Mason City
Mt. Mercy Junior College, Cedar Rapids
Ottumwa Heights College, Ottumwa

KENTUCKY

Bethel Woman's College, Hopkinsville
Cumberland College, Williamsburg
Mt. St. Joseph's College, St. Joseph
Nazareth Junior College, Nazareth
Pikeville College, Pikeville
Sacred Heart College, Louisville
Sue Bennett College, London

MASSACHUSETTS

Junior College of Bradford Academy, Bradford
Lasell Seminary, Andoverdale

MICHIGAN

Bay City Junior College, Bay City
Emmanuel Missionary College, Berrien Springs
Flint Junior College, Flint
Grand Rapids Junior College, Grand Rapids
Highland Park Junior College, Highland Park
Jackson Junior College, Jackson
Muskegon Junior College, Muskegon
Port Huron Junior College, Port Huron

MINNESOTA

Duluth Junior College, Duluth
Eveleth Junior College, Eveleth
Hibbing Junior College, Hibbing
St. Mary's College, Wauona
Virginia Junior College, Virginia

MISSISSIPPI

Gulf Park College, Gulfport
Harrison-Stone-Jackson Agricultural High School and Junior College, Perkinston
Hinds Junior College, Raymond
Pearl River College, Poplarville
Sunflower County Junior College, Moorhead
Whitworth College, Brookhaven

MISSOURI

Christian College, Columbia
Flat River Junior College, Flat River
Jefferson City Junior College, Jefferson
Junior College of Kansas City, Kansas City
Kemper Military School, Boonville
The Principia, St. Louis
Rockhurst College, Kansas City
St. Joseph Junior College, St. Joseph
Stephens College, Columbia

Teachers College of Kansas City, Kansas
 City
 Wentworth Military Academy, Lexington
 William Woods College, Fulton

MONTANA

Northern Montana College, Havre

NEBRASKA

Union College, College View

NEW HAMPSHIRE

Colby Junior College for Women, New
 London

NEW JERSEY

Centenary Collegiate Institute, Hacketts-
 town

NEW YORK

Packer Collegiate Institute, Brooklyn
 Sarah Lawrence College, Bronxville
 Seth Low Junior College, Brooklyn

NORTH CAROLINA

Mars Hill College, Mars Hill
 St. Mary's School, Raleigh

OKLAHOMA

Northeastern Oklahoma Junior College,
 Miami

OREGON

St. Helen's Hall Junior College, Portland

PENNSYLVANIA

Williamsport-Dickinson Seminary, Williams-
 port

TENNESSEE

Hiwassee College, Madisonville
 Tennessee Wesleyan College, Athens
 Ward Belmont College, Nashville

TEXAS

Amarillo College, Amarillo
 Brownsville Junior College, Brownsville
 Edinburg College, Edinburg
 John Tarleton Agricultural College, Stephen-
 ville
 Lamar College, Beaumont
 Lon Morris College, Jacksonville
 Mary Allen Seminary, Crockett
 Texarkana Junior College, Texarkana
 Tyler Junior College, Tyler

UTAH

Dixie Junior College, St. George
 Snow College, Ephraim
 St. Mary of the Wasatch Junior College,
 Salt Lake City
 Weber College, Ogden

VIRGINIA

Averett College, Danville
 Sullins College, Bristol
 Virginia Intermont College, Bristol

WASHINGTON

Walla Walla College, College Place
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